AUTUMN 2015 | **ISSUE 34**

BVAA

# valveuser Magazine

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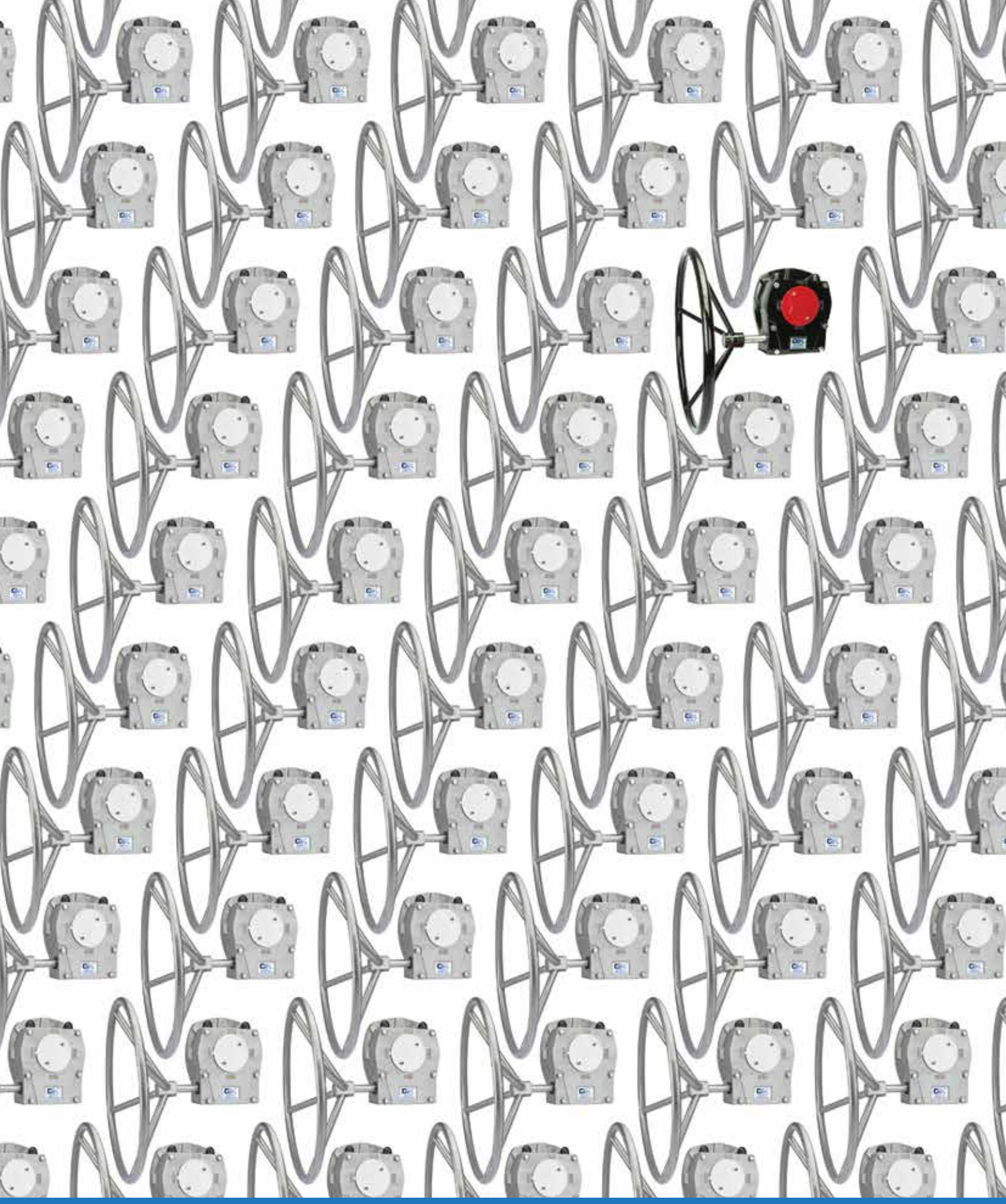

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valveuser Magazine




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**Cover:** The Johan Sverdrup oil field courtesy of Statoil.

## Comment

by BVAA Director,
**Rob Bartlett**

# Inspired by an Engineer!

A few months ago, as I listened to the radio on one of my many long car journeys, I became entranced by one of the most thought-provoking interviews I've ever heard.

The interviewee was Chris Toumazou, or I should say Professor Chris Toumazou, FRS, FREng, FMedSci, FIET, FIEEE, FCGI, FRSM, CEng, first Regius Professor of Engineering, Chief Scientist (Inst. Biomedical Engineering) – the list goes on.

A scientist, an inventor (he was recently awarded 'European Inventor of the Year') or perhaps a teacher? Certainly a prolific registrant of patents and author of over 700 published papers. He has also been instrumental – indeed inspirational - in having clinicians, scientists and engineers work closely together on finding true 'blue sky' solutions to complex problems, following a mantra *'let's be disruptive!'*

With such grandiose post-nominal initials, letters and titles, you might be excused for thinking Chris benefitted from a privileged background and an expensive education. Eton or Harrow perhaps, followed by a stellar performance at 'Oxbridge'? Well his path to success was far from conventional...

Chris described how he left school with *'just a couple of medium grade CSEs'* and entered the family catering business. However he became inspired by his uncle – an Engineer. He trained as an electrician, and was awarded a distinction in electronics. A basic OND in Engineering followed (essentially an A Level equivalent). Some deft self-salesmanship got him a place at Oxford – at the Polytechnic. He excelled as an under graduate - his talent was quickly spotted. He completed two PhDs in the time his fellows managed just one, revolutionising micro-chip design in the process.


Prof.Chris Toumazou

A post doctorate at Imperial College followed, with his analogue-to-digital work leading to mobile phone technology that most of us use today. At just 33 years of age he was made at Imperial's youngest ever Professor of Engineering.

These days he's more widely known as a world leader in bio-medical engineering, such as cochlea implants, and his genome sequencing invention has since spawned a multi-billion dollar industry. Predispositions to certain diseases can now be detected almost instantly thanks to Chris, personalised drug dosages prescribed, etc. He's currently developing an artificial pancreas.

So all in all a remarkable individual. But I for one wonder how remarkable Chris's uncle – that anonymous Engineer - must have been to inspire this young man to take the first steps in what became a stratospheric rise through engineering and academia.

If all of us emulated that uncle's enthusiasm, how many more Chris Toumazou's might emerge?

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**Members Price:** £260.00 | **Non Members Price:** £390.00

**Introduction to Actuators** - Tuesday, 6th October
**Members Price:** £260.00 | **Non Members Price:** £390.00

**Control Valves** - Wednesday, 7th October
**Members Price:** £260.00 | **Non Members Price:** £390.00

**Safety Valves** - Thursday, 8th October
**Members Price:** £260.00 | **Non Members Price:** £390.00

**Safety Integrity Levels (SILs)** - Friday, 9th October
**Members Price:** £260.00 | **Non Members Price:** £390.00

**Valves - Advanced Level (2 day course)** - Monday, 12th & Tuesday, 13th October
**Members Price:** £260.00 | **Non Members Price:** £390.00

**PED/ATEX Directives** - Wednesday, 14th October
**Members Price:** £260.00 | **Non Members Price:** £390.00

**Combating Corrosion** - Thursday, 15th October
**Members Price:** £395.00 | **Non Members Price:** £450.00

**ISO9001:2015 Update Workshop** - Tuesday, 20th October - New Date
Held at The National Fluid Power Centre, Worksop
**Members Price:** £260.00 | **Non Members Price:** £390.00

**Introduction to Valves** - Wednesday, 4th November - New Date
Held at KMD Business Centre, Aberdeen
**Members Price:** £260.00 | **Non Members Price:** £390.00

**Valves - Advanced Level** - Thursday, 5th November - New Date
Held at KMD Business Centre, Aberdeen
**Members Price:** £260.00 | **Non Members Price:** £390.00

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

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# BOOKING FORM

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Please complete the form and return to Barbara Homer.

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# Aberdeen **Valve Training**

The courses are ideal for those who specify or purchase valves

The British Valve and Actuator Association (BVAA), the valve industry's voice, trade body and leading provider of valve and actuator training, is bringing two of its most popular training courses to Aberdeen.

Delegates at the courses, *'Introduction to Valves'* and *'Valves, Advanced Level'*, will benefit from the independent delivery which BVAA can offer. There is no sales pitch at the end of a BVAA training course, as the BVAA are obliged as a not-for-profit industry body to give a fair and balanced view of the subject matter.

The courses are one day each in duration, and cover a variety of topics. These range from the basic principles of valves and valve types for the introduction course – to design requirements and testing/inspection on the advanced level courses.

The courses will be delivered by Martin Greenhalgh, a valve industry veteran of some 30+ years. Martin is a Fellow of the Institution of Mechanical Engineers and has been an Assessor for the Institution's prestigious Manufacturing Excellence Award Scheme for five years. He is the author of BVAA's *'Valve and Actuator Users' Manual'*.

The courses are to be held at the KPMD Business Centre in Aberdeen on the 4th and 5th of November. Bookings can be made via bvaa.org.uk/training or 01295 221270. The price per delegate is £390+VAT, or £260+VAT for BVAA members.

More information on course content, plus details of the dates of these and other courses which are held at venues South of the border, can be found on the BVAA website.

# View from the **other side**

This article, the fifth of our 'View from the other side' feature columns from our colleagues in the USA, is provided by Chris Warnett. Chris, a UK expatriate, is the President of CPLloyd Consulting Inc. Rochester NY, providing marketing and applications expertise for the valve and automation industry. Chris has over 38 years of engineering, sales and marketing experience in valves and automation. Reach him at chris@cplloydconsulting.com | Tel 001 585 298 6239

## The balance between **Cost, Credibility** and **Confidence**

The recent fluctuations in oil prices have forced oil companies to review and revise future capital spending. The more immediate consequence to the valve and actuator industry is the even greater scrutiny of expenditures on current projects, MRO (Maintenance, Repair and Overhaul) and replacement equipment.

When profit margins are placed under stress, then there is an imperative to cut costs. This applies to all industries, not just the oil and gas sectors. When this happens, all areas of cost are examined and not least the purchasing of valves and actuators.

Even conservative industries look to alternatives when pressured by a drop in revenue. So when procuring material, companies may be tempted to entertain bids from lesser known suppliers and manufacturers.

Specifications that were previously sacrosanct, may become more elastic if significant savings become a temptation.

But an attitude that some equipment has become commoditized, and therefore all manufacturers equal, can be a dangerously short sighted one when it comes to valves and actuators.

In our industry, reputations are built over decades. The time it takes to bring new products to the market, fully tested and field proven, presents a barrier to new suppliers and new technology alike. However to the end user, this conservatism, is aimed at avoiding plant problems. If products fail to meet specifications for construction or performance on site, the ramifications run from minor to catastrophic.

Products that do not perform to specification can impact the process efficiency of a plant. A control loop with a valve that exhibits poor controllability over the process variable, erodes plant efficiency. This may cost a few thousand dollars a year of lost product or many thousands, depending on the severity of the problem. For example the temperature control of a Hydrocracker can have such a high impact on productivity that excessive temperature swings could cost over $1M per year in lost production.

**The end user having confidence in your product is vital**

Further, if a valve or actuator has been supplied below specification, or certain aspects of the specification have been waived to save money, there is a real possibility of equipment failure.

An example would be an offshore oil production platform where a humid and saliferous atmosphere demand that materials of construction have a high level of corrosion resistance. If an off-specification product were supplied, it may work during the initial approval testing, but failure could result after only a few months of offshore duty.

Then, if the user's maintenance support is not be able to resolve the failure, a service call would be needed from the manufacturer or supplier. For offshore work this could easily cost over $2000 a day. The equipment may be repairable on site or may need to be replaced. In either case the cost of the failure could run into many thousands of dollars when service, parts and lost production are factored in.

The British Valve Industry is blessed with a number of high quality manufacturers (picture courtesy of Hobbs Valve)

When unfamiliar products are accepted to save up front purchase costs it pays to remember that the user is left with the cost of ownership of that product. This ownership cost spreads over the lifetime of the product and includes:

1) Initial purchase cost
2) Installation cost
3) Running cost
4) Anticipated maintenance costs (Preventive Maintenance)
5) Un-anticipated maintenance costs (Breakdown)

a. Repair costs
b. Lost production costs
c. Replacement production costs

The initial purchase costs and the anticipated running and maintenance costs can be reasonably extrapolated when selecting familiar brand named equipment. Users may have an installed base of product and experience with these costs.

The un-anticipated costs, by definition, are harder to predict.

In the power industry, many plants have a level of redundancy built in, however in some areas this is not always possible. If a critical fan damper actuator failed, for example on the main forced draft fan (FD), then the boiler and generator set associated with that fan would have to be taken off line. The time to repair the actuator could run into several days for a second tier manufacturer that did not have an appropriate level of global parts and service support. The power company in the meantime would have to utilize replacement generation from the next available, lower efficiency, plant. This easily could cost the company hundreds of thousands of dollars per day.

When these un-anticipated life cycle costs are brought into the equation, the savings of a few percent on the purchase price can easily be eclipsed by one failure.

There are hundreds of valve and actuators suppliers around the world, many claiming to comply with the standards and specifications used by our industry.

Even with these assurances the credibility of a manufacturer may be in question. The manufacturer may be using a reputable brand name without the permission or even knowledge of the Brand owner. Despite some success in battling the counterfeiting of western brand names and designs, the practice still continues. However, the high level of publicity given to this practice in recent years has put valve users on their guard.

Certificates of compliance to standards and specifications are important tools to ensure even reputable brands are up to date on compliance and can be requested for each contract.

Some users still perform their own quality audits on manufacturers. These audits in some cases include review of material certification for individual casting pours as well as mill certificates. This requirement is not confined to the nuclear and offshore oil industries. One major US municipal water department routinely requests this level of certification on contracts.

The best way to protect against inferior or bogus product is to use only known reputable suppliers of known reputable brand named valves and actuators. Fortunately there are many strong brands to choose from, so that competitive bidding is still practical and effective.

The more credibility that a valve or actuator manufacturer can accrue, then the greater the confidence that the end user can place in their product and its overall lifetime performance.

# Forthcoming BVAA Events

## Aberdeen Golf Day

BVAA's popular Scottish Customer Golf Day is back for its 4th edition. The event will be held at Inverurie Golf Club, on Thursday 24th September 2015.

The event is kindly being sponsored by GPEC - ATV and Colson X-Cel.

We call this event our 'customer golf day' as it provides our members with an opportunity to entertain clients and contacts from the Aberdeen area. Teams can be booked via BVAA at £300+VAT, which includes, coffee and bacon rolls, 18 holes of golf, prizes and an evening meal.

## BVAA Annual Meetings and Ball

**Crewe Hall, Cheshire, 27th November 2015**

BVAA's Gala event of the year is back for the 76th time. 2015's event will take place in the luxurious surroundings of Cheshire's Crewe Hall. The event has three main stages. We kick off in the morning with a series of high-level presentations from experts on hot topics which face the industry. After lunch, and the BVAA AGM, there will be an afternoon networking activity, followed by an evening champagne reception, fine meal and top-level entertainment.

As with many of our events, BVAA subsidise attendance for members, so do not miss this great value opportunity to network within the valve industry – in style!

Bookings can be made through Isobel on 01295 221270

## BVAA Supplier Day

**Brighouse Area, late October – contact BVAA for details**

To reflect the growing number of members of BVAA whose primary activity is supplying the valve industry itself – the team at BVAA has launched our first ever supplier day. The event is aimed at enabling BVAA members to work together and improve supply chain efficiencies.

Our members who manufacture in the UK will hold a series of one-to-one meetings with those members, and non-member companies who can supply them. The end result, we hope, will be an opportunity to find the optimum supplier for the product they need. At the time of writing the details were not finalised. Please call BVAA on 01295 221270 for full details which should now be available.

# New Members

The following companies have joined BVAA since the last issue of Valve User Magazine:

### Alpine Metal Tech

Graham Morris, Managing Director (left) and Geoff Leese Product, Manager Valves, pose with the BVAA plaque and some of their valve products.

### Whitford

Martin Garnett, Managing Director with the BVAA plaque.

### WH Partnership

Sales Manager Phil Wilson with WHP's BVAA plaque

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## BVAA's Technical Hot Spot

TECHNICAL HOT SPOT

## PED AMENDMENT SI 2015 No. 399 NOW EFFECTIVE

SI 2015/399 (The Pressure Equipment (Amendment) Regulations) 2015 is in force from 1st June 2015.

These Regulations amend the Pressure Equipment Regulations 1999 (S.I.1999/ 2001) which implement the PED (97/23/EC).

This means that fluids must now be classified in accordance with Article 13 of 2014/68/EU (the new PED).

This is an alignment with the CLP Regulations (Classification, Labelling and Packaging Regulations (EC) 1272/2008). While the number of categories for group 1 fluids has been increased significantly, it is not anticipated that many fluids will change group.

From 1st June 2015 to 18 July 2016, the rest of Directive 97/23/EC still applies.

The new PED (2014/68/EU) will apply in full from 19th July 2016.

# BVAA's New Technical Expert Groups (TEGs)

*'BVAA has recently undertaken a radical overhaul of its management of technical work, both inside and outside of the Association,'* writes BVAA's Director Rob Bartlett. *'It is crucial that BVAA members are aware of this, as there may be a few surprises!'*

*'Following our Strategic Review, we knew we had to take some emphatic measures to ensure the continued effectiveness of the BVAA technical service. Appointing Martin Greenhalgh was pivotal, but only part of the process, as contraction and consolidation in the industry meant the time was right to address how we managed the technical work, and usher in some priorities.'*

*'Those familiar with standards work will know that traditionally a trade association identifies and addresses a technical issue and often then produces a 'guideline.' These guidelines occasionally get passed up to BSI for wider input, eventually to be transformed into a 'British Standard.' Often these BSs are then offered up to CEN (Europe) or ISO (International) for conversion into more globally accepted standards. Other countries' national standards bodies follow similar processes too. All these fora can lead to tweaks, occasionally substantial changes, but many years of international co-operation has meant that most of the major product standards for our industry have now been developed and refined, and in many cases adopted / dual-numbered by several standards bodies.'*

## So why the change at BVAA? Rob Bartlett explains...

*'Everyone runs their business in a much leaner fashion these days and company headcounts are typically much lower, and personal workloads much higher. Time is Money. This often means that fewer technical people with sufficient experience are available to participate in technical and standards work.'*

*'While many current and new standards will be relevant in some way to a business, only those with a critical impact are therefore likely to prick people's interest. Traditional standards management has been through broad-scoped, rather unwieldy standing-committees, at trade association and BSI level. Such bureaucracy, breadth of coverage and 'lost' time has largely been a turn-off for members. Regrettably non-participation has meant key developments with standards have therefore often been missed or picked up far too late*

Rob Bartlett

Martin Greenhalgh

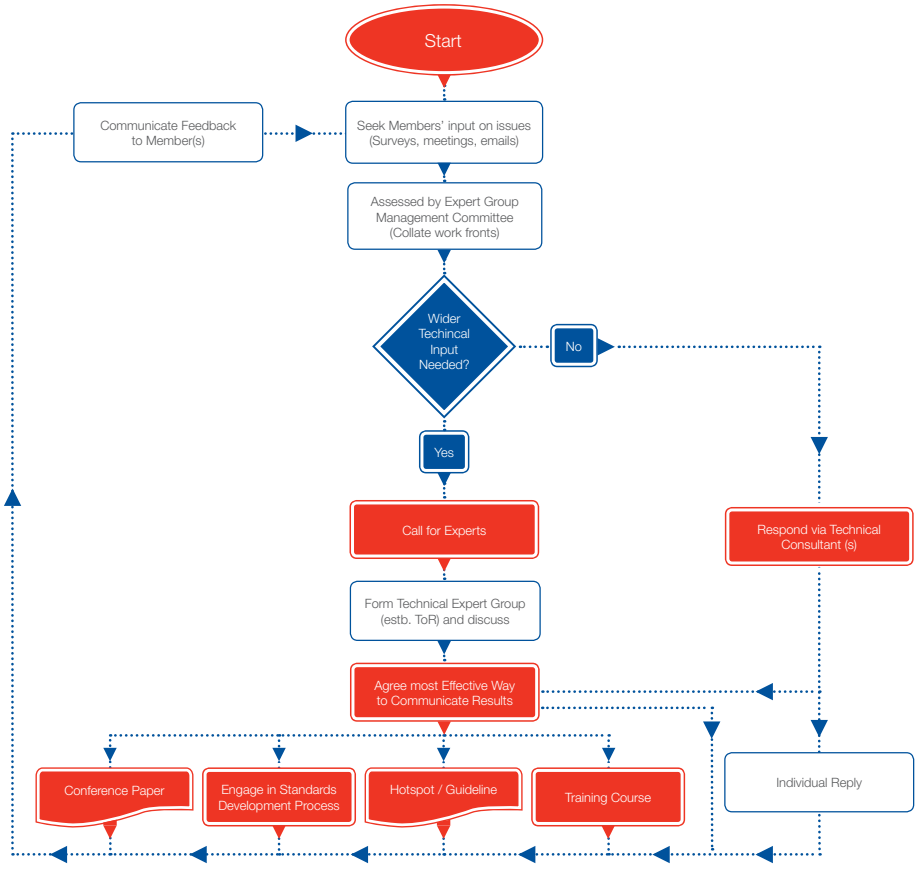
*by individual experts to influence the document's final content. Cue some disgruntled engineers, often with some unanticipated – occasionally substantial - costs for their employers.'*

## So what's changed at BVAA?

*'A fundamental change in approach,'* says Rob. *'We've initiated a series of "Technical Expert Groups" (TEGs) at BVAA. These will typically be much smaller, single-subject, focussed groups with a life-span dependent upon their topic.'*

*'As the graphic below shows, we'll start by surveying members for input as each issue arises on the radar. A small technical management group will then assess the feedback, interest levels, relevance, etc. and decide how best to address the issue. A 'TEG' might then be formed, but whether they handle the work via correspondence, video conference or actually in person will largely be left to the individual TEGs to decide, as appropriate. Each TEG will have a nominated leader, terms of reference, and follow the BVAA Meetings Code of Conduct.'*

*Direct participation in say a standard's development might then follow. Other outcomes however could include a*



*'single-subject, focussed groups with a life-span dependent upon their topic.'*

*simple "Technical HotSpot" ('heads up' advisory notice), a Conference paper to communicate information more widely, perhaps a BVAA Guideline or even a new Training Course if the subject warrants it. If it is decided that a draft standard (new or revised) doesn't warrant association-wide input however then BVAA won't participate. We will of course still continue to support any individual member who wishes to engage in drafting product standards that directly affect them, helping them draw on Government assisted travel funding, BSI support, etc. The main outcome however will be a loop back to communicate developments to the wider membership.'*

*'Basic Standards – those that have an industry-wide impact, such as terminology, design, product testing and so on – will continue to be monitored closely as befits their importance. There have also been interesting developments with API Standards – often critical to the valve and actuator industry. For a time they were the subject of close inter-standards body co-operation and dual-numbering, but API is now pursuing a more parochial approach. They certainly tend to meet more regularly and develop standards more swiftly, however attending API meetings attracts no Government funding for UK delegates – a major issue.'*

*'So again BVAA is stepping in,'* says Rob. *'We've created a small fund to assist BVAA members in travelling to these meetings, which are often held in the USA. In return for a report of the meeting – to update their fellow members via the loop-back principle - a BVAA representative can mitigate the costs to his company, and of course receive reports on other similar meetings they cannot personally attend, from fellow members.'*

*'Henceforth management of technical and standards issues through the TEGs should be agile, targeted, comprehensive yet streamlined, with high degrees of relevance and in-built feedback routes to the wider membership,'* concluded Rob.

**BVAA's Technical Hot Spot**

# THE NEW ATEX DIRECTIVE 2014/34/EU

## There is a new ATEX Directive: 94/9/EC has been aligned to the New Legislative Framework (NLF). The new number is 2014 /34/EU.

There is no change to the scope and the Essential Safety Requirements remain the same. The Classification groups (M1, M2, 1, 2 & 3) are also unchanged.

The conformity assessment modules are now identified with designations (familiar from the PED) such as Module D, Module A etc. Although rewritten, the content is substantially the same.

The requirements on Notified Bodies have been increased significantly (Articles 17 to 23). Market surveillance has also been increased (Articles 34 to 38). Notified bodies will have to re-apply and a reduction in number is anticipated.

Requirements on Economic Operators (manufacturer, authorised representative, importer or distributor) are spelled out in detail. In particular:

- Importers must ensure that the appropriate assessment procedure has been carried out and also mark the product with their name, trademark and address.
- An importer or distributor is considered to be a manufacturer if he places a product on the market under his trade name or modifies a product so as to affect compliance with the Directive.

Existing certificates referring to 94/9/EC remain valid. However, any changes after 20 April 2016 will need a new certificate.

The new directive will be applicable to items placed on the market from 20 April 2016.

- Stock received from a manufacturer prior to 20 Apr 2016 has already been placed on the market. The 94/9/EC certificates are still valid.
- Stock held by manufacturers on 20 April 2016 has not been placed on the market. Therefore it will have to comply with the new directive when placed on the market.

As a minimum, references (the Directive, module names, and detailed requirements on the Declaration of Conformity) will have to be updated on new documentation.

# **Flowstar** joins BVAA

**Flowstar Ltd**, one of the world's largest stockists of safety, relief and reducing valves, has joined BVAA. The company, which has a strong tradition of supplying industrial valves from its large valve stores in Hull, has made the move after a continued period of growth and expansion.

Safety Valves in Stock at Flowstar's Hull Facility



Flowstar holds large stocks of valves from Broady, Niezgodka, Besa, Berluto and Nabic, with close links to most other major manufacturers in this sector. This means the company has a proud record of supplying often critical valves at very short lead times. The company are well versed at working on urgent projects, with same day shipping available on most products.

The team at Flowstar caries significant expertise in the valve industry. Each of its technical sales staff are specialists in their field with at least 20 years' experience. This translates into a high level of competence in working with customers on valve projects of any size.

*The company has joined BVAA with a view to further expanding its relationships within the large variety of industries it serves.*

Chris Turner, Managing Director, commented:

*'Flowstar recently passed its 25th year of trading, we have built our reliable and solid company on partnerships and have proved to be an excellent business partner to suppliers and customers alike. We look forward with excitement to this partnership with BVAA, another longstanding stalwart of the valve industry'.*

For more information on Flowstar's extensive valve stocks, or on working with the company, please visit www.flowstarvalveshop.com


**Flowstar Ltd**
**Tel:** 01482 601 030
**Email:** hull@flowstar.co.uk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# **ARC Energy** Take On 'The Cotswold Plod'

For the second year running an **Arc Energy** team entered this gruelling 39.8 mile walk along the Cotswold way to raise money for Action Medical Research for Children.

### Our team were:

- Adam Reimann, Project Manager, our Captain
- Tom Majewski, Welder/Cladder
- Cliff Hall, Sales Engineer
- Martin Sandles, Project Manager

### Supported by:

- Rosemary Robinson, Director
- Alan Robinson, MD
- Steve Fletcher, Goods-in Storeman

The Arc Energy team was the first away at midnight, and at around 1.30 they passed through the first checkpoint at Coaley Peak without stopping. All four were looking comfortable with the pace, well ahead of the crowd already. By the time they passed the Ebley by-pass at 2.30am they were already ahead of last years' time by 90 minutes. They arrived at Cripplegate at 3.20am – a very quick coffee, then lights were seen in the path at the entrance to the checkpoint, so the team headed off at speed, determined not to be caught. A shame they did not know that the lights belonged to volunteers and the next team were nowhere near!

The next check point was a further 16.8 miles and by this time the pace was slowing. More than half way and the walkers were still powering ahead, stopping only for a quick snack, taking on more water and changing socks, then off again.

The team arrived at the final destination, Cleeve Hill Golf Club, at about 1.05pm to cheers and photographs, then remembered to check in for the last time to get their time registered.

To everyone's amazement they were 2 hours ahead of the next team. The Arc Energy team were undoubtedly advantaged by the fact that Cliff knew the route well, so there were no mistaken deviations that delayed us last year, and other teams this year

It was commented upon that the walkers performed their task with smiles on their faces, excellent teamwork and good spirits. From the reply, this was not the whole story, and there were some very naughty words mentioned, but what goes on the walk stays on the walk.... They were sporting enough, despite their aches and pains, to stay and cheer the next team in (who after all, had done 2 more hours than our team), although they could not stay awake to stay any longer.

The Just Giving site is still open at **http://www.action.org.uk/sponsor/ArcEnergyResources** or see any member of the team.


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# KKI TO SUPPLY THE JOHAN SVERDRUP OIL FIELD

**KKI have been awarded a contract by Statoil/ AkerSolutions to supply all control and choke valves to one of the largest ever discoveries on the Norwegian Continental Shelf - the Johan Sverdrup offshore oil field.**

**We anticipate more than 400 valves will be manufactured and delivered over a three-year period. The order comes as a result of KKI re-securing a long-term frame agreement with Statoil until at least 2020, with further options to extend to 2026.**

Photo Credit: Harald Pettersen - Statoil ASA

Supporting KKI in the execution of the contract is OME, KKI's appointed representative in Norway. OME provides local support and a vital interface between operators and the manufacturer for project and aftermarket activities alike.

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# **Advanced Valve Solutions** is the Primary Channel for Hora and Persta Valves and Spares for the UK and Ireland

With many years of engineering experience on Hora and Persta valves in critical power generation applications **Advanced Valves Solutions** (AVS) offers more than just products.

In addition to holding joint patents with Hora, AVS engineers have excellent working relationships with engineers and technical staff at both Hora and Persta. This enables AVS to offer the right product for your application and the best technical support possible.

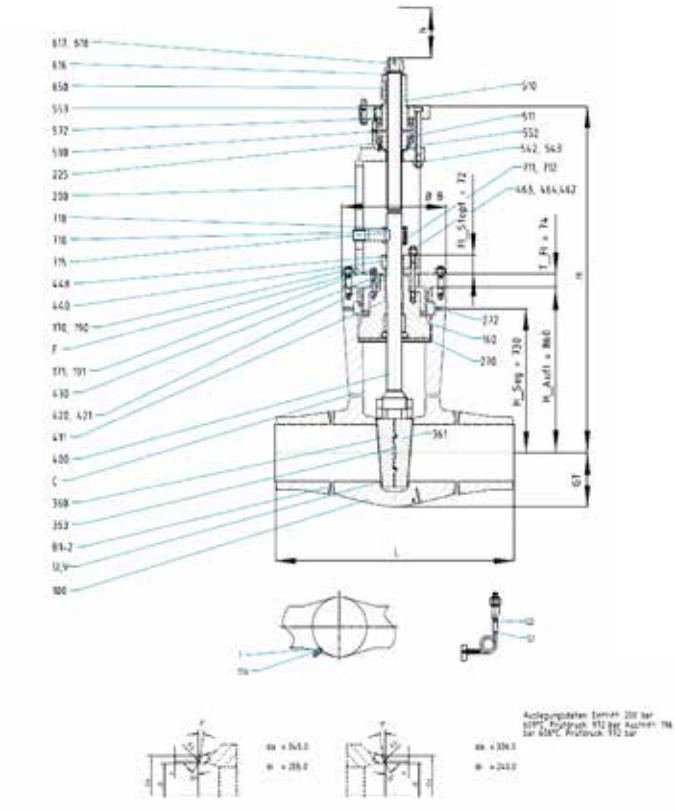
Our experience and expertise with Hora and Persta valves has enabled us to help many UK power stations significantly reduce maintenance costs and downtime.

**AVS has:**

- designed custom valves and associated trim
- assessed critical spares stock levels to minimise downtime
- provided valve diagnostics to predict failure and implement preventative maintenance

## The Definitive Information

AVS has valve figure numbers and drawings for all Hora and Persta valves installed in the UK and Ireland. This means that we have the definitive, as built, information on your valves and we can ensure that



you always get the correct spares and replacement valves even when the original valve has modifications.

In our experience when Hora and Persta valves have been installed by the lead contractor during the initial plant build it is possible for a site to have an incomplete manifest and be unaware of the origin of certain critical valves.

Reverse engineered spares cost the UK power industry millions of pounds every year because of poor quality. Make sure that you get original, correct spares and replacement valves.

## AVS Spares Management System

AVS, in conjunction with Hora, has developed a Spares Management System to ensure that you always have the correct drawings, spares, repairs and replacement parts.

Always having the correct drawings and having excellent lines of communication with Hora and Persta ensures that the we can give best advice to repair or replace and thus ensure the optimum balance of low cost of ownership and maximum availability.

Advanced Valve Solutions has replaced many valves in critical applications in UK power stations and has a proven track record in protecting stations from loss of production and saving £000,000s in repairs and replacement parts.

Advanced Valve Solutions

**Advanced Valve Solutions (UK) Ltd**
**Tel:** +44 (0)1270 534685
**Web:** www.AdvancedValveSolutions.co.uk

# AUMA UK achieves Wessex Water approved supplier status

**AUMA UK**, which has been an established supplier of electric actuators to Wessex Water for over a decade, has achieved approved supplier status from the utility.

As part of the authorisation process, the supplier of modular actuation technology was comprehensively evaluated for its products, training support and service.

Wessex Water plants supported by AUMA include Charmouth STP where the company supplied products from its sister company SIPOS Aktorik to support Sequencing Batch Reactor technology.

AUMA has strong roots supplying the water industry which date back over 50 years. AUMA Actuators Ltd, the group's UK subsidiary, supplies the majority of UK utilities: the company's credentials include a number of frameworks and approved supplier agreements.

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# **WRAS** Approval Opens up New Markets for Albion

**Albion Valves** (UK) Ltd, an increasingly popular UK valves supplier, has secured approval from the UK's Water Regulations Approval Scheme (WRAS), on their range of solenoid valves, now compliant for potable water applications across the HVAC industry as well as industrial and process sectors.


Water fittings used on any system that either carries or receives water from the UK mains supply, must comply with WRAS and meet stringent safety standards. The WRAS testing cycle for valves includes 200,000 tests on both hot and cold water applications, and WRAS approval is an established sign of quality. UK water authorities are legally bound to accept only WRAS approved products on their applications.

A solenoid is electromechanically operated valve controlled by a magnetic current. The simple and unique design of the solenoid offers fast and safe switching and high reliability, making them one of the most commonplace ranges of valves in the UK water and building services industries.


In the building services industry, WRAS approved solenoid valves are specified for use in situations where water comes into contact with people such as bathrooms, toilets, vending machines, coffee machines and water coolers. In these applications they are most frequently used to control water flow and direction, shut off, release, dose and distribute hot and cold water.

They are also a vital tool to help prevent water wastage and are commonly fitted adjacent to PIR sensor taps designed for automatic shut off after use. These are used extensively to facilitate hot and cold water services in public places including; restaurants, offices, commercial kitchens, motorway service stations and leisure centres.

Les Littlewood, Albion Sales Director commented:

*'Solenoids are a product line that our distributors require again and again, and as such we have introduced WRAS approved solenoids offering them even greater choice.*

*We also stock WRAS approved Ball and Butterfly valves, commonly used for behind the scenes building installations such as controlling the filling of water tanks and main circuit isolation. This latest addition to our portfolio extends a more comprehensive range of potable water products to our distributors, and will also help us grow our presence in this sector.'*

Albion currently stocks around 5000 lines of industrial valves, suitable for applications predominantly within the process, water, building, HVAC industries, all available from its distributor network.

**Albion Valves UK ltd**
**Tel:** 01226 72 99 00
**Web:** www.albionvalvesuk.com

# SIPOS Develops Data Sources

## An extensive application data sheet resource has been developed by **SIPOS Aktorik**.

Designed to provide at-a-glance summaries of installations and technologies for the company's electric actuators, the literature covers wide ranging case-study examples including 'Avoiding Water Hammer' (Carrum Ultrafiltration Plant), 'Penstock Solar' (ExxonMobil) and 'Integrated Actuation' (Callide B Power Station).

Having proven highly popular in Europe and Australia, the electric actuator manufacturer has produced a set of US branded data-sheets to support the American market. Topics selected for the US portfolio of data sheets include 'Precision Control', 'Linear Flow Control' and 'Flood Defence.'

SIPOS reports that the appeal of its single-sheet summaries comes from their easy-on-the-eye design and concise copy. The data sheet content details applications and design challenges. Supporting technical data is incorporated including a function profile. Images to illustrate the case-study are also provided.

SIPOS AKTORIK

**SIPOS Aktorik**
**Tel:** 01275 871 141
**Web:** www.sipos.de

# Center Line® 200 Resilient Seated Butterfly Valves Approved for Lead-free Service

## Center Line® 200 Resilient Seated Butterfly Valves from Crane ChemPharma & Energy are now NSF-61 & NSF-372 certified for potable water and lead-free service.

Certification to NSF/ANSI Standard 61 ensures that a product meets the regulatory requirements for the U.S. and Canada, and it can often fulfill the testing requirements for many other countries as well.

*'For more than 40 years, Center Line valves have delivered reliable performance in the chemical processing, food and beverage, power, and pulp and paper industries'* said Alysha King, Global Business Line Manager for Crane ChemPharma & Energy. *'With the NSF certification, we can now further enhance the breadth of solutions that we provide to our customers, and help ensure the safety and quality of potable water systems worldwide.'*

Manufactured in stainless steel and aluminum bronze materials, the valves offer positive bi-directional shutoff, direct mount automation and exceptional performance in both gas and liquid service. These valves feature a phenolic or aluminum-backed cartridge seat and precision-machined parts to assure years of dependable operation. For more information about Center Line resilient-seated butterfly valves and all of Crane's valve solutions, please visit www.cranecpe.com.

The Center Line 200 from Crane exceptional performance in both gas and liquid service

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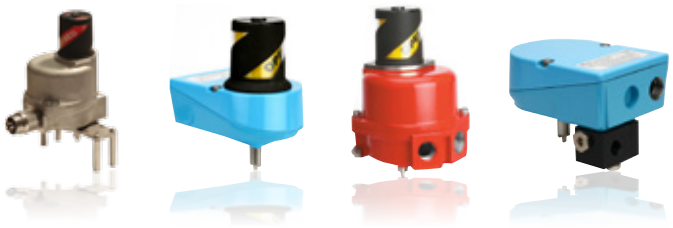

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# How do you Maintain Site **Safety and Efficiency?**

A breather valve, pre and post service

**The Health and Safety Executive** (HSE) has contacted two of our customers in the past week, requesting evidence of their site's preventative maintenance and management of ageing plant plans.

How do you service your breather vents? A simple visual inspection is no longer accepted by the HSE. They need to be calibrated, leakage tested and certified as fully functional. If you don't look after them they could lead to your plant being closed, a fine by the HSE or worse still, harm to your employees or loss of life. It is that serious.

Breather vents lose their ability to seal over time. We often inspect vents that have had weight added to the pallet assembly to compensate for poor sealing.

This is a very dangerous correction because it would not be picked up unless we had conducted a weight test as part of our calibration check. It could result in a collapsed tank. The subsequent HSE investigation would centre on why the weight was added, by whom and for what reason.

The conservation of vapours and the minimisation of water ingress are key elements in sustaining the quality of stored liquids. Storage tanks are typically large volume, low pressure vessels so the provision of tight sealing and adequate vapour/air exchange is essential.

An efficient breather vent safely conserves vapours up to the maximum allowable working pressure of the tank. Many tanks have nitrogen blanketing. Any loss of nitrogen is expensive and savings are immediate if the vent is serviced and tested correctly.

**We recently assisted a customer with annual nitrogen costs in excess of £250k. With calibrated breather vents and blanketing gas regulators we saved the customer £90k in the first three months following completion of our work which cost less than £15k.**

Servicing, which includes calibration and leakage tests, is fast becoming a basic health and safety requirement. As experts in valve sales and installation and maintenance, we recommend an annual check for each valve on site. Any changes to calibration, in-depth remedial work and exterior coating needs more extensive work.

With our mobile test equipment, fully equipped service vehicles and comprehensively trained engineers, we can provide onsite servicing at your facility.

We can also offer offsite servicing. This will involve taking the valve back to our state-of-the-art workshop and taking it apart, piece by piece, checking every component. When fixing a valve, we always begin with a full survey. Only then will we be able to determine the necessary repairs. We cannot diagnose potential problems until we have completely disassembled the valve.

We sometimes find that key components have been eroded. We use the authentic manufacturer's replacements where possible, however if lead time is an issue or the parts are obsolete we have sophisticated machining and fabrication capabilities to create complex components ourselves.

Every valve is fully serviced, calibrated and tested before being returned to site to resume operation. Lead times are kept to a minimum and will save you weeks compared to a new replacement.

*'A full strip and removal from the tank every year is not necessary in most cases'*

External coatings are another important aspect of the valve. These can deteriorate, for example on fibreglass valves due to UV degradation. But now that we are fully equipped with our new Paint Facility, we are quickly able to re-finish vents as new and return to site.

The key to reliable breather vent performance is structured regular checks. A full strip and removal from the tank every year is not necessary in most cases unless the application is extremely severe. In most cases a combination of full service and calibration can be followed by one or even two routine annual visual checks.

Some deterioration of the vent and its components can be visible if compared to their as new condition. Assentech can work with operators and train site maintenance staff to conduct structured annual inspections so that we are only called in to calibrate and certify in the second or even third year.

Ultimately we can make the valve virtually as good as new. We can bring what would otherwise be considered an obsolete product back up to factory-new condition. The potential cost savings are huge. You can see the difference in the photos (opposite).

Servicing and maintaining valves isn't necessarily rocket science, but it does need specialist knowledge and equipment. Our customers are happy to let us focus on the performance of their vents while they concentrate on running their business.

The initial benefits of servicing, calibrating and certifying breather vents may not be so clear but once you consider the cost to a business following a contaminated load going into production, a collapsed tank or action by the Environment Agency, the pay back for servicing, calibrating and certifying the performance of your breather vents makes sense.

More information can be found at www.hse.gov.uk/pressure-systems/are-you/user.htm or www.assentech.co.uk/services/breather-vents/ .

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# Engineering the Next Generation of 'Valve Doctors'

Over the past 50 years, **IMI Critical** and **IMI CCI** has been serving customers throughout the world, solving a variety of valve-related problems. Our product is the combination of superior engineering design, the finest materials and meticulous workmanship.

We want to remain a trademark of quality where companies worldwide buy our valves with confidence. This is why IMI CCI institutionalized the Valve Doctor® program, to develop the most innovative flow control experts in the industry.

The Valve Doctor® Program was initiated in 2000 with 11 original members. Today there are over 60 Valve Doctors, residing in 12 countries (Austria, USA, UK, Switzerland, Sweden, Spain, Italy, Czech Republic, India, South Korea, China, and Japan).

We believe The Valve Doctor® training programme is widely acknowledged as the highest level of application engineering in the severe service industry. Team members not only bring with them solid industry experience, but also have expertise in commissioning equipment, as well as specific, integral valve and plant knowledge that allows them to solve customer problems and optimise plant performance.

Dan Watson (Valve Doctor) on the job

The Valve Doctor® program covers a wide range of expertise in:

- Industry: Power Generation, Oil & Gas, Nuclear, Industrial
- Application: Control Valves, Isolation, Actuation, Controls
- Subject: Fluids, Materials, Technology
- Process: Design, System Analysis, Manufacturing, Root Cause, Troubleshooting

For example, in the Power Sector, they will travel to a power station that is down, which utilizes a competitor's product. Our Valve Doctors® provide expert guidance towards resolving the situation and retrofitting the necessary equipment to get the plant up and running in as short a time as possible.

In LNG, the Valve Doctors® work closely with engineering companies and compressor manufacturers at design phase not only addressing the critical kinetic energy as well as noise and vibration issues but also focus to achieve the highest and most efficient production output together with our valued customer.

IMI Critical Engineering is an industry-leading provider of critical flow solutions for the international oil and gas, fossil power, nuclear power, petrochemical and iron and steel industries, and consequently the Valve Doctors® have a firm focus on the process flow problems facing those sectors. Indeed, their expertise goes far beyond valve design, taking in plant operation, system layout and control system integration.

*'The Valve Doctor® is the personification of our philosophy of Engineering GREAT and our Valve Doctor® Program is the mechanism we use to develop our next generation of Valve Doctors®.'*

Chris Peterson – Valve Doctor® Program Chairman

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# **EnerMech** Shaping Next Generation of Engineers

## Mechanical engineering group, **EnerMech**, has been accredited by the Institution of Mechanical Engineers (IMechE) to mentor the next generation of chartered and incorporated engineers.

The company's EnerMech Academy has been sanctioned by IMechE to run a Monitored Professional Development Scheme (MPDS) which encourages the progression of young engineers.

At the same time EnerMech's Technical Director Phil Bentley, a Chartered Engineer for 16 years, has been awarded Fellowship status by the institution. Mr Bentley started off his engineering career on graduating from the Heriot-Watt University in Edinburgh, and since achieving Chartered status in 1989 he has held a number of senior engineering and management roles in the energy industry.

EnerMech provides a range of service lines to the international oil and gas industry, employing 2400 staff in more than 25 locations with operations in the UK, Africa, Asia, Australia, Caspian, Middle East, Norway and the USA.



Mark Hunt, President of IMechE presenting EnerMech's Phil Bentley with his Fellowship accreditation

## *'the highest levels of engineering ability'*

Companies which adopt the MPDS are making a commitment to the development of young engineers who have the potential to achieve professional registration as a Chartered or Incorporated Engineer.

Phil Bentley said: *'Achieving Chartered Engineer status indicates that engineer is a committed individual who is capable of the highest levels of engineering ability. The EnerMech MPDS invests in young engineers, bringing out the best in them and encourages them towards continual learning and progression.'*

Under the MPDS, more experienced EnerMech engineers mentor their younger colleagues and offer support while working through the incorporated and chartered engineer process.

Mr Bentley added: *'This is a highly regarded accreditation, which is recognised globally in the engineering world and sends out a message that at EnerMech we are very serious about our engineering credentials. It is also an important factor when looking to recruit young professionals as they know EnerMech will support them throughout their engineering career.'*

Roy Begg, Cranes & Lifting Account Manager, had recently been accredited as an Incorporated Engineer and will mentor other candidates as he works towards achieving Chartership.

He added: *'Being accredited by IMechE recognises a certain level of experience and ability and the more you put in to this the more you get out. EnerMech supports people willing who commit to professional development as it benefits the business in the long-term.'*

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# **Rotork** launches 3rd generation IQT intelligent part-turn valve actuator

The introduction of the new **Rotork IQT** electric valve actuator brings the advanced functionality and asset management capabilities of Rotork's 3rd generation intelligent technology to the direct-drive operation of part-turn valves.

Proven in the field by thousands of IQ3 multi-turn actuators, new functionality brought to the compact and robust IQT includes an unrivalled range of advanced data logging and communication capabilities that have been increased in response to the end users' desire to access more data, both in the field and in the control room.

Diagnostic graphics present a window into the process, showing the valve torque, usage profiles and service logs, facilitating real-time analysis directly at the actuator. The information-rich backlit display is the focus of attention for non-intrusive wireless communication and multi-functional indication, including user-friendly multi-lingual menus for configuration and commissioning. Local position indication, valve and actuator status, asset management and diagnostic operating information is available to download and can be viewed directly at the actuator on the large LCD display. The display provides real-time status data, positional and warning icon information; actuator setup and operating menus along with detailed diagnostic and operational data screens are clearly displayed in dot matrix format.

Using the Rotork Bluetooth® Setting Tool Pro, commissioning and configuring the actuator is faster and simpler than ever. The setting tool can also be used to securely transfer data from the actuators to a PC for analysis using Rotork Insight2 diagnostic software. Insight2 can further streamline actuator set up by pre-defining complete sets of instructions and settings. Each collection of settings can be saved as a 'mission data set' and quickly applied to multiple actuators requiring the same configuration.

Valve maintenance requirements can be identified and anticipated, eliminating unplanned interruptions to the process or over-cautious planned maintenance outages. The actuator's powerful datalogger provides comprehensive data capture for planned maintenance and troubleshooting. Data includes valve torque profiles, operational start profiles, vibration and temperature trend logs and an event log. Specific asset management information includes running time, average torque and number of starts. Service or maintenance alarms are selectable from configurable menus including open and close torque levels, total starts and vibration levels.

Torque sensing is reliable and accurate over the life of the actuator. Similarly, reliable valve positioning is critical. A patented absolute encoder with only one moving part tracks valve position without the requirement for a battery even when there is loss of power. In addition, as all configuration and datalogger data is stored in a non-volatile EEPROM memory, all settings are retained. If an actuator is manually operated during a power outage, the local display and remote indication is kept updated by the use of a battery which also facilitates data logging and power-off commissioning.

The new Rotork IQT electric actuator brings the advanced functionality and asset management capabilities

IQT actuators are suitable for three phase, single phase or DC power supplies, with a torque output range of 50 to 2000Nm available for isolating, regulating and modulating duties. The motor always runs in the correct direction, irrespective of supply type and connection. In addition, the output speed can be non-intrusively adjusted over a 4:1 range without affecting the output torque. All valve interface bases conform to ISO5211 or MSS SP 101 and are fitted with removable couplings.

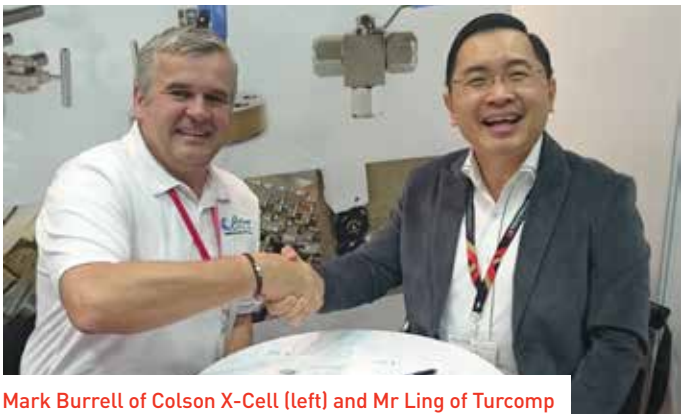
Hazardous area actuators are fully approved to the latest ATEX standards. Network connectivity options include Foundation Fieldbus®, Profibus®, HART® and DeviceNet® open systems, as well as Rotork's own dedicated Pakscan wired or wireless systems.

**Rotork UK**
**Tel:** +44 (0)1225 733 200
**Email:** information@rotork.com
**Web:** www.rotork.com

# **Colson X-Cel** Appoint Malaysian Agent

## Turcomp Engineering Services Snd Bhd and **Colson X-Cel** make partnership official.

Following an initial meeting at OSEA 2015 with key personel from Turcomp and 6 months of strong business between Colson X-Cel and Turcomp the two parties have now officially sealed the new partnership with an agency agreement covering all areas of Malaysia .



Mark Burrell of Colson X-Cell (left) and Mr Ling of Turcomp

Turcomp Engineering Services Sdn Bhd, a Bumiputra status company, was established in year 1992 in Labuan. The company name, Turcomp denotes TURbine & COMPressor, which was the initial business, specialised in providing maintenance services of rotating equipment for the process and power plants in the vicinity of Labuan. Since then, Turcomp has evolved to become an integrated services and solution provider, today Turcomp has 12 offices, 4 workshops and 2 warehouses across major cities in Malaysia.

The agreement signing took place on stand at OGA 2015 between Mr Ling of Turcomp and Colson X-Cel Sales Director Mark Burrell. Mr Burrell added:

*'We are very excited about working with Turcomp. With a good strong relationship already beginning in these early days, the potential for strong business levels are very high.'*

Please contact Turcomp on: +60-3-5518 8118 or jajarazin@turcomp.com

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**Web:** www.colson.co.uk

# **Zoedale** appointed Sole UK distributor for Guth Valves

**Zoedale** has been appointed as the sole UK distributor for the high quality German made Guth Hygienic Valves. The team at Zoedale will be selling these valves into the UK brewing sector where they are already well established.

The owner-managed firm of Wilhelm Guth Ventiltechnik GmbH & Co. KG is a leading company in the field of development and manufacture of high-quality stainless steel control valves for the national and international markets. Their products are used mainly as process components in the sectors of beer and drinks, wine, dairy and foodstuffs and also pharmaceutical, biotechnology and cosmetics. Zoedale will solely be concentrating on the beer and brewing range.

Zoedale will be marketing Guth's innovative range of brewery products

Zoedale will stock a range of hygienic manual butterfly valves in sizes DN10 – DN150. These valves have a wide range of pipe connections and have the options of adding pneumatic actuation, positioners and control heads. They will also stock a range of non-return valves in a full range of sizes. In addition to this Zoedale will be marketing Guth's innovative range of brewery products including double butterfly valves, double seal valves, double seat valves, ball valves, dosing valves, modulating valves, pressure reducing valves and modulating butterfly valves. All made to hygienic standards on site at Guth in Germany.

Zoedale will only market top quality reliable products – Guth was established in 1861 and have continued to develop and refine their products since then. Today they are a leading name in the hygienic control sector and the products sit nicely with the existing Zoedale ranges.

For more information contact Tim Guest on 01234 832832



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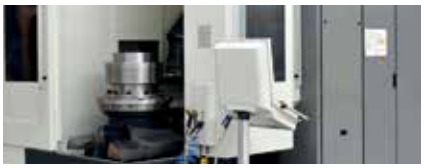
# Achieving great things

Gall Thomson Petal Valve MBC in Hose Transfer System



"The proven technology of Gall Thomson Marine Breakaway Couplings is protecting offshore transfer operations all over the world.

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VALVE user MAGAZINE

# OIL & GAS FOCUS

## INSIDE:

Valve and actuator developments relevant to those attending Offshore Europe 2015

OE 2015 Offshore Europe
8-11 SEPT 2015
ABERDEEN, UK
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CONFERENCE & EXHIBITION

Picture courtesy of Pentair Valves & Controls

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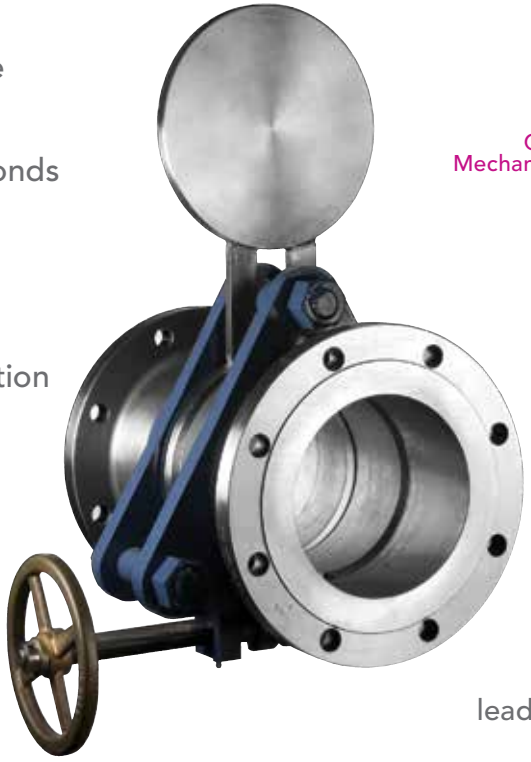

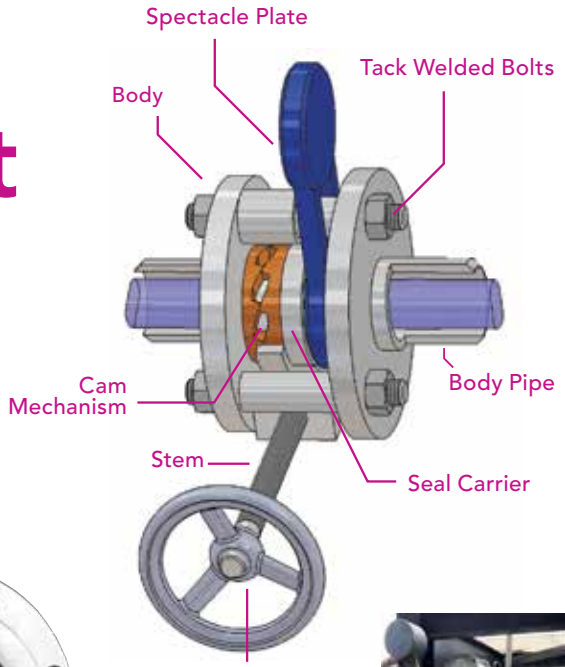


SchuF Fetterolf Line Blinds can lead to significant Time and Cost Savings.

# No line spreading required

Line Blinding With Traditional Solid plate System

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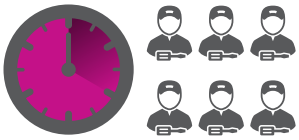

14 inch to 24 inch pipeline
**Solid plate between flanges**
4 to 12 hours by 6 plus men.
Plus tools and spare parts

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30 to 60 Seconds by 1 man

14 inch to 24 inch pipeline
**SchuF Cam Set Line Blind**
Up to 5 Minutes by 1 man

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# KKI wins offshore contract to supply valves to Johan Sverdrup offshore field

Engineering firm, **KOSO Kent Introl** (KKI), has today announced that it has successfully won a contract to supply all control and choke valves to Statoil/Aker Solutions for one of the largest ever discoveries on the Norwegian Continental Shelf; the Johan Sverdrup offshore field. KKI anticipates manufacturing and delivering more than 400 valves over a three-year period.

**Stuart Billingham, sales director at Kent Introl comments:**

*'We are delighted to announce this contract with Statoil and Aker Solutions. It has been awarded following Kent Introl successfully securing a long-term frame agreement with Statoil until at least 2020, with further options to extend to 2026. This is the third time Kent Introl has held frame agreements with Statoil for its control and choke valve products, having previously secured contracts from 1996-2001 and 2007-2015. We look forward to continuing our relationship over the long-term.'*

Supporting Kent Introl in the execution of this contract is OME, Kent Introl's appointed representative in Norway since 2008. OME will provide local support for individual projects and aftermarket activities.

The Johan Sverdrup field is one of the five biggest on the Norwegian continental shelf, with expected resources of between 1.7–3 billion barrels of oil. Phase one of the development will comprise four platforms, production, drilling, riser and living quarters. Production start-up for phase one is scheduled for late 2019.

Stuart Billingham Sales Director, KKI

kentintrol

**Koso Kent Introl**
**Tel:** 01484 710311
**Web:** www.kentintrol.com

# Cost Reductions Achieved by Valve Condition and Performance Monitoring

## Part One: Score Diagnostics Limited's Portable MIDAS Meter®

In any market where the returns on capital invested are diminishing, the first reaction of the stakeholders inside many organisations in that market is to immediately focus on reducing the production cost base. The pursuit of cost reductions should however not completely stop investment in innovations and technology which in themselves deliver significant cost saving opportunities. History has also shown us that reducing maintenance expenditure on critical plant equipment in the short term increases medium to long term production costs, so we must not fall into that known trap again.

In the oil and gas markets, the most significant costs are the initial investment in the design, construction and installation of the process plant, whether that is an offshore oil platform or an onshore refinery. Once producing, the safe, environmentally sound and efficient continuous operation of these processes becomes the focus of the stakeholders. Any break in the production output attracts a potential major loss of income, so we can see how critical the maintenance decisions and activities become in this market.





Given these conditions, it is understood that innovations and technology which help operators avoid unnecessary downtime generate a lot of interest, especially when the adoption costs are low in relative terms, when compared to the potential downtime costs it avoids.

Reliability studies have proven that all mechanical equipment fails over time and when looking at valves, that failure represents major risks to plant operations. These risks include:

- Safety Accidents/Incidents
- Environmental Escapes
- Efficiency/Profit Losses

Knowing where your valve is in its performance life-cycle at any given point in time has a high potential value.

Score Group plc has developed a number of valve condition and performance monitoring products and services to address their existing customers' and the wider market's needs. We examine the 'entry level' Midas meter below, details of permanently installed and fully integrated solutions can be found in part two of this article on page 58:-

## An Ultra-Portable and Intrinsically Safe Certified Acoustic Emissions (AE) Valve Condition Monitoring Device

**Quickly, Easily and Non-Invasively Find, Quantify and Trend Through Valve Leaks**

The "entry level" product for through-valve loss/leak detection and quantification is the hand-held MIDAS Meter®, which uses an acoustic emissions (AE) sensor to detect the high frequency sound signals emitted by leaks across isolating valves' seat to seal interfaces. It is a non-invasive inspection technique which requires the operator to place the sensor directly onto the outside surface of the valve body. Once in position, it is possible to see within a few seconds if there is any leakage across the valve seat(s). Using the PDA-based software, the operator can immediately calculate an estimated leak rate, which can of course then be trended over time. This device is ideal for customers looking to carry out maintenance troubleshooting and Risk Based Inspections (RBI) of valve populations.

## MIDAS Meter® Case Study :-

After trying 2 alternative and unsuccessful leak detection methods, the customer turned to Score's MIDAS Meter®. Despite the extremely high background noise in the area of the plant where the valves were located, Midas Meter® was able to conclusively identify the two problematic leaking valves (from 12 suspected) on one train and target them for maintenance.

Having the Midas Meter® as part of the initial plant troubleshooting plans would have saved the customer a great deal of time and effort, leading to significant cost savings, by avoiding a wider scope of unnecessary remedial repair work and plant downtime.

Based on their positive experience with MIDAS Meter®, the customer proceeded to purchase it.

Full details of this and other case studies can be supplied on request.

Score (Europe) Limited
Intelligent Valve Management™
www.score-europe.org

**Score Group plc / Score Diagnostics Limited**
**Tel:** 01779 480 000
**Web:** www.score-group.com

# AUMA introduces fail safe actuator innovation

AUMA actuators with FQM fail safe unit open and close a valve in the event of emergencies without power supply.

## For applications with significant hazard potential in the oil & gas sector and other industrial markets, **fail safe actuators are required**.

These specialist devices automatically open and close valves in the event of emergency, even with disrupted power supply. Meeting these challenging market requirements, a new AUMA FQM fail safe unit offers an innovative mechanical actuator solution.

Incorporating a patent pending constant force spring motor, the new AUMA fail safe unit mechanically provides the required torque in the event of an emergency. While conventional springs lose 80% of their torque across valve travel, the AUMA solution provides virtually constant torque. Additionally, an overriding gear arrangement ensures that the spring does not move during standard operation. Both these factors contribute to enabling selection of significantly smaller actuator solutions. Premature spring fatigue and excessive torques at the valve are also avoided.

A further special feature of the AUMA FQM innovation is variable running speed during fail safe operation. The soft end position approach of the valve is achieved by reduced speed. This also avoids pressure peaks within the pipeline and preserves the valve.

The new fail safe unit can be combined with AUMA SQ part-turn actuators or SA multi-turn actuators paired with GS part-turn gearboxes, both with AC controls. Operating concept, interfaces and communication with the DCS are identical to AUMA standard actuators. Due to AUMA's modular design concept, the fail safe unit can be retrofitted within existing plants.

The AUMA fail safe unit is particularly suited to automation of butterfly valves and ball valves at an angle of up to 90°. The fail safe unit meets the requirements of safety-related applications up to SIL 2/SIL 3 and is virtually maintenance-free. An explosion-proof version is also available.

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# Ichthys LNG Project Uses **Smith Flow Control** Interlocks for Safe Pipeline Processes

A typical pig trap system mounted with interlocks



The Ichthys LNG Project, one of the most significant oil and gas projects in the world, is using **Smith Flow Control's** safety interlocks and valve actuators throughout its facility to protect its people and equipment during hazardous operations.

Located off the coast of Western Australia, the Ichthys LNG Project is effectively three mega-projects rolled into one, involving some of the largest offshore facilities in the industry, a state-of-the-art onshore processing facility and an 889 km pipeline uniting them for an operational life of at least 40 years.

Over 2000 interlocks and portable actuators from Smith Flow Control (SFC) will be installed throughout the onshore processing facility in Darwin. These safety interlocks provide protection against the over-pressurisation of vessels and other valves across the plant by guaranteeing an open path to pressure relief is maintained at all times during maintenance or other work exercises on process equipment. A simple mechanical valve interlock system ensures that no relief valve can be isolated until the spare relief valve has been brought on-stream. A spare relief capacity enables continuous production while maintenance procedures take place, eliminating the need to isolate and shut down the whole process, maintaining efficiencies at all times.

As an additional layer of safety, interlocks were also specified on the facility's pig trap, serving the main line from offshore. SFC's vessel closure interlock was fitted to the 42″ pig trap, connecting to the large subsea pipeline.

Onshore processing facilities at Bladin Point, Darwin (Source: INPEX 2014)

Pig traps allow operators to insert and remove pigs (pipeline tools) without interruption to the pipeline product flow. The greatest danger occurs when opening the pig launcher or receiver door as opening the vessel without first correctly isolating, venting and draining, can cause the trap door to fly open and the pig to shoot out at high speed, with potentially fatal consequences. Key interlocks negate this risk by mechanically proving the 'closed and isolated' status that enables venting and draining of pig trap vessels before loading or unloading operations. By fitting an interlock (door lock) to the pig trap door, valves and other equipment on the vessel it ensures that only the correct sequence of events can occur.

Pig trap interlocking is invariably non-linear, as the stages of isolating, venting and draining are typically complex and repetitive. To support this application, Smith Flow Control supplied Sequence Control Units (SCU's) to the Ichthys Onshore LNG facilities to ensure correct and safe operation. The SCU is a mechanical key issuing device located close to the valve. It differs from traditional key exchange units in that, upon inserting a permit key, a selector knob is rotated to a fixed position before the next key in the sequence is released. In this way, complex sequences can be accommodated, using the same safety principles, and in an ordered and simple fashion.

*The Ichthys LNG Project places great emphasis on the safety and wellbeing of its operators*

The Ichthys LNG Project places great emphasis on the safety and wellbeing of its operators, adhering to best practice Human Factors Engineering (HFE) principles to ensure quality, safety and fit for purpose of equipment and facilities. To help ease any valve operating difficulties, SFC is supplying its EasiDrive portable valve actuators throughout the site.

Portable valve actuators are designed to assist in the operation of valves that would otherwise require a high number of turns using excessive, sustained force by several operators at once. With the tool, one operator can efficiently work banks of valves, while reducing fatigue and injury risk. Portable valve actuators can reduce the stress on workers and improve productivity, especially with valves that may be otherwise difficult to operate because of high torque or where adverse climates make operations more challenging. Interlocked valves were also mounted with portable valve actuator kits, to further simplify operations at the plant.

## Conclusion

By taking simple steps to integrate safety into valve operating systems, workers are protected and operations proceed in a designated, safe way. Interlocks are versatile building blocks that can be configured to meet almost any simple or complex procedure. In addition, portable or remote valve drive systems are cost-effective ways to operate difficult to open and/or hard to reach valves, protecting personnel while increasing efficiency.

**Smith Flow Control**
**Tel:** +44 (0)1376 517901
**Email:** enquiries@smithflowcontrol.com
**Web:** www.smithflowcontrol.com

# Showing Offshore

The Italian manufactured Sitecna® range of ATEX certified air preparation and flow control will be displayed on the **Red Dragon** stand 1A29, for the first time at SPE Offshore Europe this year. The range displayed will include two completely new products.

The range will be on show at stand 1A29

Providing a robust and secure solution to a common problem, the new KTAM tamper proof cap is available to suit the Sitecna® regulators and filter regulators of sizes ¼″ to ½″. Machined from solid 316L stainless steel, the device provides the facility for preventing unauthorised access or accidental damage to the setpoint adjuster, secured by means of a hasp for padlocks or locking wire. This can be supplied ready fitted to an instrument or as a kit for retro-fitting to an installed regulator.

The second new product is the first part of the eagerly awaited extension to the existing range of ¼″ to 1″NPT pressure regulators, filter regulators and pneumatic filters. Now available in 1½″ and 2″NPT are high flow capacity pneumatic filters up to Cv=46.5 in 25bar rated 316L stainless steel or 20bar rated epoxy coated aluminium constructions. Elastomer choices are available to enhance gas compatibility and suit ambient temperature ranges down to -55°C. These products have just been announced and already carry the same ATEX and GOST EAC certification as the rest of the Sitecna® product range. The corresponding filter regulators and regulators in these sizes are expected to be released next year.

## *'robust solution'*

Specifically for highly corrosive environments as found offshore, Sitecna® offers additional options beyond their standard constructions:

- Offshore high build coatings for aluminium or stainless constructions
- Corrosion resistant materials such as monel, super duplex, 6MO etc can be used instead of 316L to manufacture according to project specifications.

For project engineers and managers, this ensures compliance with demanding design requirements intended to deliver extended working life of components in harsh environments, resulting in reduced operating costs.

At the main entrance to Offshore Europe, follow the perimeter walkway to the left in the first hall to find the Red Dragon stand, see the new products and find out more from the Red Dragon team.

Red Dragon Valves®

**Red Dragon Ltd**
**Tel:** 01443 772 500
**Web:** www.reddragonvalves.co.uk

## BVAA's Technical Hot Spot

# VALVE TERMINOLOGY - COMPONENTS prEN736-2

**What is it?:** BS EN736-2 is the middle part of a three part series of standards defining Terminology used in BS EN valve product standards. This part deals with those items that are hardware.

**Why is it important?**: A clearly defined valve language is essential so that we can all effectively communicate with each other. By also using these words and phrases in your product catalogues and drawings you are using defined Terminology which will help to avoid mis-interpretation during the development of contracts.

Supersedes: A 1997 version.

A revision of the standard is being proposed. Now is therefore the time to review the existing definitions and propose amendments where you disagree with the current definition. It is also the time to add new definitions for hardware items that you believe need defining.

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Prisma ALPHA CE 0518 Ex sira CERTIFICATION

# New NORSOK Qualifications for **W H Tildesley Forgings**

W H Tildesley uses a closed die, drop forged process

## **W H Tildesley Ltd** has just received its latest set of NORSOK qualifications

New M650 Edition 4 QTRs extend Tildesley's qualification until mid-2020. Materials covered are super duplex stainless steels F51 (UNS S31803), F55 (UNS S32760) and austenitic stainless steel F44 or "6Mo" (UNS S31254).

**Sales & Marketing Manager, Phil Hobley commented:**

*'We are now qualified to produce a range of parts under these qualifications: Flanges, Nozzles, Valve Bodies, Valve Components and Fittings.*

*'The team here have done a fine job of stepping through the rigorous approval process. We were qualified by Aker Solutions who were very complimentary about our manufacturing facilities and business systems, which they regarded as unusually sophisticated for a smaller independent company.*

*'We run a tightly controlled materials planning, scheduling and quality system that gives us complete traceability of all materials and processes with a minimum of fuss. We have been producing components under NORSOK qualifications since 2008.*

*'The qualification process includes qualifying the heat treatment facility and conducting furnace verification surveys on the furnaces that must be used for any work supplied against the QTRs. W H Tildesley has partnered with the Special Steels Group in Sheffield. Their Woodbourn Hill plant has an advanced automated set of furnaces for solution treatment prior to rapid water quenching and offers rapid turnaround for small and medium batch work which is an excellent fit with our requirement.'*

A copy of our QTRs can be accessed from our home page at www.whtildesley.com

W H Tildesley uses a closed die drop forged process to produce parts at its site in Willenhall, West Midlands.

Parts can be supplied as-forged, proof machined or finish machined from a few grams up to 70kg finished forged weight.

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# ‘Plugging’ the issues; an alternative to Ball Valves

There is nothing “new” in the World may be a slightly overstated cliché given the plethora of technologies, techniques and triumphs that we read about on a weekly basis – but it is true that some inventions, although improved, can never be bettered.

One such tried and tested idea may just be the Lift Plug Valve.

Metal Seated Ball Valves have been the trusted technology for many applications where high pressure or temperatures are endemic to the process – but they do have issues – for example; oil and gas can contain impurities that damage the ball seats over a period, causing in-line leakage.

This is made worse by friction when grains of sand are trapped between the ball and seat; grinding away the seat surface.

The answer could be to use a metal seated Lift Plug Valve.

Like the ball valve they allow 90 degree operation, are suitable for High Pressure/Temperature applications and the tapered plug is lifted from the seat, so there is no friction damage.

*Like the ball valve they allow 90 degree operation*

In comparison to the ball valve the seat of a Lift Plug Valve is larger, which virtually eliminates the chance of wear caused leakage.

With the harshest of media such as those processed in coking plants, valve seals can be destroyed in a matter of months, but there are reports of SchuF Lift Plug Valves lasting up to four times longer before maintenance is required. That’s four times more production before earning potential is interrupted.

SchuF also offer three and four way lift plug valves, adding not only value but flexibility to your process design.

That flexibility, created using the highest specification tolerances through precision CNC machining, has allowed SchuF to supply valve solutions that have handled temperatures of 800°C, proving the Lift Plug Valve is ideal for many niche applications.

There will always be process engineers who are quite conservative – sticking to the ball valves they know and love – accepting and working with the imperfections, but with the added value of longer periods between maintenance and ultimate replacement, alongside the other easily explained benefits of the Lift Plug Valve, it has to be worth a conversation with Valve and Process Solutions.

SchuF Lift Plug Valves, a harder wearing, lower maintianence alternative to ball valves?

valve & process solutions

**Valve & Process Solutions Ltd**
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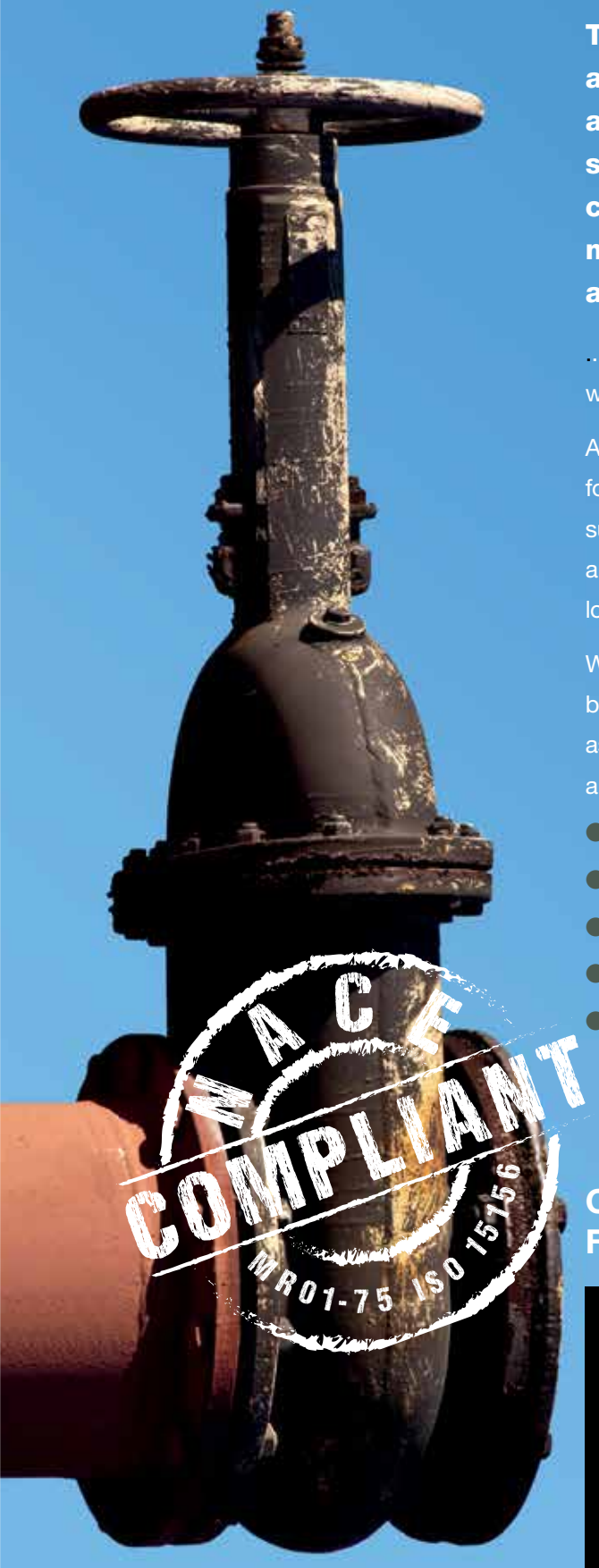
# Corrosion.
# It's what you can't see that can cause the biggest problems.




**The internal working mechanisms of products and components used in certain applications and in harsh environments, can succumb to stress and corrosion too. This can eventually cause major problems such as unplanned maintenance, leaks and limitations on plant availability...**

...which is why it is important that products and components used within these industries comply with NACE standards.

At Springtech we are used to developing valve spring solutions for harsh environments, working with NACE compliant materials such as Inconel X-750, Nimonic 90 and Elgiloy. These materials are produced to extend the lifespan of components and provide longterm savings and ROI for customers.

We can offer you spring design, development and manufacturing based on a wealth of experience, working in industry sectors such as medical, aerospace, automotive and energy, with specific oil and gas expertise in areas such as:

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- Subsea Systems
- Valves
- Pipelines
- Propulsion systems


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# **Alpha Controls** to Showcase Key Product Ranges at Offshore Europe

Alpha Controls will exhibit flameproof product ranges ALV Solenoid Valves and ALS Switch Boxes at Offshore Europe 2015

**Alpha Controls** will be exhibiting some key product ranges, from the extensive variety they supply to the Oil and Gas market, at Offshore Europe 2015. Visitors to the show can find the Alpha Controls team at stand 4B121-5, which Alpha is sharing with Chinese partner Wuxi St.Hans Air Controls E/I Co., Ltd.

## ALV Solenoid Valves

The Alpha Controls Ltd Range of ALV Series Solenoid Spool and Direct Acting Valves are now available for ATEX Hazardous Exd IIC T6 and Safe Area's in SS316 or Aluminum. The Solenoid's are available in both Namur and In-Line types. These products will be on show at SPE Offshore Europe, stand 4B121-5.

Also on the Alpha Control's stand will be Solenoid spool valves with Precision Cartridge Design of spool and seals, in 3/2 way Normally Closed and 5/2 way suitable for operating Spring return and Double Acting pneumatic actuators. Our extensive portfolio of in-house Valves and Actuator packages and ALV series solenoid valves together with a full range of Switchboxes and process products will offer you a complete solution to your applications. Come and talk to an Alpha controls at Offshore Europe from the 9th – 11th September 2015.

*Come and talk to an Alpha Controls at Offshore Europe from the 9th – 11th September 2015*

*The Alpha Controls team welcome visitors to the stand to discuss the range and see our new range of RF Wireless communication switch boxes.*

## ALS Switch Boxes

The Alpha Controls Ltd Range of valve monitors, (limit switch boxes), including the ALS and WVM Series Monitors which are used primarily for rotary position indication devices both for local and remote valve status indication (with cable or without cable), will also be on show at OE2015.

ALPHA CONTROLS LTD

**Alpha Controls**
**Tel:** 01942 525 833
**Web:** www.alphacontrols.co.uk

# **Advanced Valve Solutions** is your subsea PLR equipment partner

Within the oil and gas industry AVS has experience of working topside as well as subsea

**Advanced Valve Solutions** (AVS) has recently undertaken a number of large projects where we supplied all the valves and hot stabs for temporary subsea pig launch and receive stations for pipe laying services. In total AVS supplied well over 250 temporary 4″ 2500# trunnion mounted subsea ball valves, 400 2″ floating ball valves and several 1″ ball valves and check valves in various sizes.

The reason we selected trunnion mounted subsea ball valves is based on our experience of working with many operators. After a period of non-operation with a floating valve design there is a chance of an uncontrolled increase of the torque and this increase of torque makes the operation of the valve difficult for the ROV.

## Custom designed Hydraulic Stab

The orders were completed with the supply of several custom designed special hydraulic 4″ stab connector systems. Stab connection systems are used on pig launchers and receivers for subsea pipe laying to carry out flooding, cleaning, gauging and calliper operations.

The male stab is used to connect the hose from the ship to the pig launcher inlet or to connect a check valve assembly to the pig receiver outlet. In deep water it is usually very time consuming to operate a standard male stab. In order to avoid long vessel times, the hydraulic stab assembly has been developed. The hydraulic operation makes it possible to achieve smooth and reliable operations, time after time, even in ultra-deep water below 2,500 metres.

AVS supplied valves for subsea pig launch and receive stations

The hydraulic male stab has an integrated API dual port female receptacle to accept the API dual port male stab and debris dummy. Once the hydraulic stab has been inserted into the receptacle, the API dual port male stab is then used to activate the hydraulic male stab to either engage or disengage into or out of the female receptacle. The hydraulic male stab usually incorporates a female hammer lock union as its end-connection but we can manufacture various types of connection depending on the application requirements.

Within the oil and gas industry AVS has experience of working topside as well as subsea. AVS is your partner when it comes to EPIC pipe laying contracts, tank park renewals and platform overhauls.

**Advanced Valve Solutions (UK) Ltd**
**Tel:** +44 (0)1270 534685
**Web:** www.AdvancedValveSolutions.co.uk

# Bestobell Reaches 200th Vessel Milestone

Bestobell's Valves are widely used on LNG Carriers, FLNG and FSRUs

**Bestobell Marine**, part of the President Engineering Group (PEGL), has reached a significant milestone in the company's history, after receiving the 200th order for its cryogenic valves for use on vessels.

And what's equally exciting is that 100 of these orders have been secured in the last two years!

Bestobell's recent increase in vessel orders is due in part to the company's expansion into supplying valves to LNG (liquefied natural gas) fuel gas systems, which is a rapidly growing market.

Over the past two years, Bestobell Marine has established itself as one of the leading cryogenic globe valve suppliers for LNG fuel gas systems and the company has recently received its 37th order of this kind. With the expected increase in demand for fuel gas systems, the company is in a strong position to increase its market share even further internationally.

Duncan Gaskin, Sales Director of Bestobell Marine, said: *'We are really excited about the huge opportunities for developing our business even further into the marine sector. We are now supplying cryogenic valves for LNG carriers, LNG fuel gas systems, reliquefaction equipment and re-gasification equipment on a global basis. We look forward to working with our marine customers towards the next milestone!'*

Bestobell Marine is the marine division of Bestobell Valves, a world-leader in the manufacture of LNG cryogenic valves, with over 50 years' experience. Bestobell's Valves are widely used on LNG Carriers, FLNG (Floating Production & Storage Units) and FSRUs (Floating, Storage & Re-gasification Units). The company designs and produces valves to meet specific requirements in the marine sector and has supplied cryogenic valves to a majority of the major shipyards building LNG Carriers.

Bestobell Valves

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# Pentair Launches New LNG Pressure Relief Valve for Increased Flow Efficiency

The changes in the LNG market have led to increased tank sizes

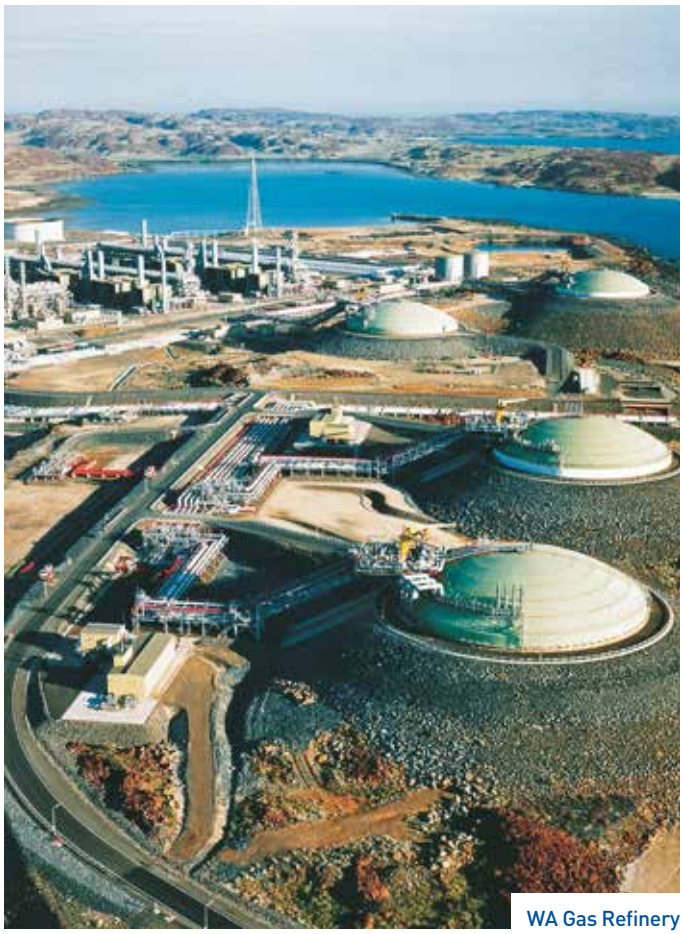
**Pentair Valves & Controls** is expanding its Anderson Greenwood pressure relief product range with the launch of an improved design of its pilot-operated pressure relief valve (POPRV) model for LNG storage in on- and offshore applications.

The Anderson Greenwood 9300H offers LNG operators a key advantage by increasing flow capacity by 30 percent, enabling the design and construction of larger storage tanks, without the need to increase valve sizes. In addition, the compact new model minimizes equipment footprint, which is especially critical for LNG vessels where space is limited. The valve's increased robustness and durability also provide significant savings on overall maintenance costs, as it requires less frequent and easier repair services.

As the size of LNG storage tanks is increasing, valve flow capacity needs to meet these growing requirements for optimum performance. Additionally, the special requirements of LNG storage applications make it necessary for valve equipment to accurately maintain the pre-set pressure and resolve any events that occur outside of these configurations. The Anderson Greenwood 9300H valve design overcomes these two key challenges in LNG storage applications. By providing increased flow, the valve can efficiently and quickly relieve pressure without the need to increase its size, offering LNG carrier owners and plant operators design flexibility. This is a vital advantage in LNG pressure protection applications, where cost-effectiveness, operational efficiency and maintenance are crucial to reducing unplanned operational downtime.

The 9300H model comes in sizes from 2 x 3 inches to 12 x 16 inches, with sturdy body casting and simplified trim design for easier maintenance. Its pilot, mounted directly on the valve cap,

The Anderson Greenwood 9300H



WA Gas Refinery

provides a lower and more compact valve profile and increases its sturdiness for more stable flows. This shorter body design is fully versatile and can accommodate both on- and offshore storage requirements. In addition to its increased flow capability, the new valve handles a large temperature range and features a self-draining body and low sensitivity to back pressure within the exhaust piping. The valve also significantly reduces the possibility of leakage by enhanced seating forces and improved seat design.

Jean-Paul Boyer, senior regional product manager EMEA, Pressure Management Group at Pentair Valves & Controls comments: *'The changes in the LNG market have led ship and plant managers and their suppliers to increase tank sizes for bigger flow capacity and performance. However, the need for small and reliable equipment still remains the same. Pentair's valve expertise addresses the industry requirements of operators and end users with the Anderson Greenwood 9300H POPRV. We have carried out extensive testing to develop a valve design that evenly distributes more flow and contains pressure under varying conditions, without increasing its size. We bring extensive application experience in the LNG sector, which enables us to improve and optimize critical valve technology. Working closely with our customers, we continue to support future developments in LNG and put the needs of LNG vessel designers, builders and operators at the forefront of what we do.'*

Pentair

**Pentair Valves & Controls**
**Tel:** 01858 467 281
**Web:** valves.pentair.com/valves

# Tube Connection Breakthrough from **Parker**

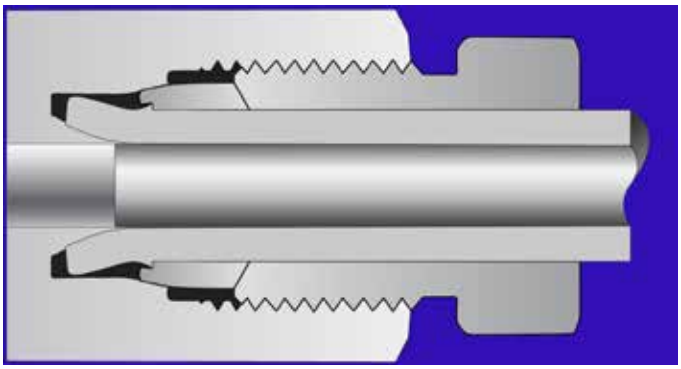
## Flared cone design prevents tube ejection and incorporates redundant second seal for enhanced reliability. Very short make-up time: up to 5 times faster than traditional cone and thread.

A breakthrough in high integrity tube connection technology offering instrumentation system designers and installers major performance and time-saving advantages is now available from Parker Hannifin. Designed for working pressures as high as 22,500 PSI (1,550 bar), the new 'flared cone' technology advances the performance of compression style tube connections. It provides users with a simple and reliable means of speeding the assembly of instrument tubing systems for use in higher pressures applications in the oil and gas industries.

Developed by Parker Autoclave Engineers, the new flared cone connection (FCC) technology is a significant advance on the type of 'cone and thread' tube connections pioneered by the company.

The new flared cone connections are much simpler to make up. Installers can typically complete the task in less than four minutes, after only minimal training. This time-saving can result in significant cost reductions on installations with a large number of tube connections. Flared cone connections are also especially cost-effective in applications where leaks caused by vibration are an issue.

According to Michael O'Keane, Product Marketing Manager for Parker Autoclave Engineers, *'Our new FCC technology offers the best of both worlds. It combines the make-up and installation simplicity of compression style connections with the strength of cone and thread, and has more features and higher pressure capabilities than similar technologies.'*



Parker's new tube connection technology uses a flared cone design that prevents tube ejection and forms the primary metal-to-metal seal

*The new flared cone connections are much simpler to make up. Installers can typically complete the task in less than four minutes, after only minimal training*

Parker Autoclave Engineers' patent-pending FCC technology is based on a single sleeve compression style system. However, unlike conventional designs, the tube end is flared to prevent any possibility of ejection – and also provides the connection's primary metal-to-metal seal. When the gland nut is tightened, the inside surface of the anti-ejection flare mates with a cone in the fitting or valve. The compression sleeve then mates with the body of the component to form a second, redundant, metal-to-metal seal. This dual seal approach has a major reliability benefit; in the unlikely event that the primary seal fails, the secondary seal preserves the integrity of the connection. Installing a flared cone connection is simply a matter of screwing the gland nut into the fitting or valve and tightening it to the prescribed torque.

Parker's new flared cone connection (FCC) technology is designed for working pressures as high as 22,500 PSI

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# Into the Deep: Heaps Delivers on First Subsea Project


First Subsea's PRT featured valves supplied by Heap & Partners

**Heap & Partners** has recently delivered valves for a subsea application for the first time in its history. The 3″ ASME 1500 RTJ flanged valves, are part of Heaps' Phase range of Trunnion Mounted Ball valves.

The project was successfully undertaken with connector technology experts First Subsea Ltd, and fellow BVAA member company KT Hydraulics which supplied its Kracht Double Acting Hydraulic unit.

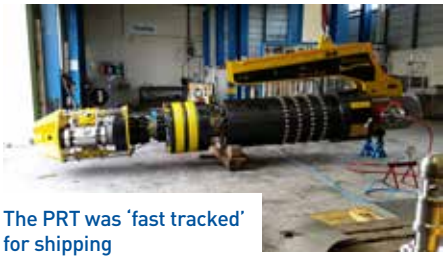
The valves formed part of a 32″ Pipeline Recovery Tool (PRT) which is used on pipe laying projects. It offers air injection for launch and capture of the pig; dewatering and in the event of a 'wet buckle', the recovery of the pipeline itself in water depths of up to 2,300 metres. The PRT uses First Subsea's patented Ball & Taper Technology (Ballgrab®). The First Subsea PRT's have been supplied for pipelines up to 42″ Diameter for over 25 years and this failsafe technology uses the Ballgrab® patented mechanical grip system.

Critically, for the nature of this project, the valves and actuators are totally ingress sealed for the deepwater application. The interface between the valve and actuator is also pressure compensated in order to eradicate any potential for leakage at the installed depth.

This was a fast track project and as such Heap & Partners were able to manufacture, witness test and deliver the valves and actuators within 14 weeks of the order.

Heap & Partners Business Development Manager, Peter Burnett, explained the importance of the relationships between the three companies in order to successfully deliver the project to schedule:

A close up of the interface between the valve and actuator



The PRT was 'fast tracked' for shipping

*'The teams at Heaps, KT Hydraulics and First Subsea Ltd have formed a good working relationship. Through close cooperation we were able to combine the considerable specialist expertise of each party to great effect, and have been able to deliver a technically robust solution to a short lead-time.'*

Heap & Partners has a strong track record of delivering valves to high criticality industries, more information can be found at www.heaps.co.uk

Heap & Partners Ltd

**Heap & Partners Ltd**
**Tel:** 0151 488 7222
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# Achieving great things

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# Cost Reductions Achieved by Valve Condition and Performance Monitoring

## Part Two: V-MAP® G3 and MIDAS® Sensor

In any market where the returns on capital invested are diminishing, the first reaction of the stakeholders inside many organisations in that market is to immediately focus on reducing the production cost base. The pursuit of cost reductions should however not completely stop investment in innovations and technology which in themselves deliver significant cost saving opportunities. History has also shown us that reducing maintenance expenditure on critical plant equipment in the short term increases medium to long term production costs, so we must not fall into that known trap again.

To read more about Score's approach to this problem, please see part one of this article on page 36.

The MIDAS® range of valve condition and performance monitoring equipment and systems allow you to safely, efficiently and effectively ensure that your proactive and predictive maintenance interventions are all completed "with cause" and are fully focused and prioritised.

The net effect of taking this approach to investing your maintenance budget is minimum costs for maximum impact/return on investment – i.e. cost reductions with the added bonus of more reliable and efficient production, which in turn maximises profits.

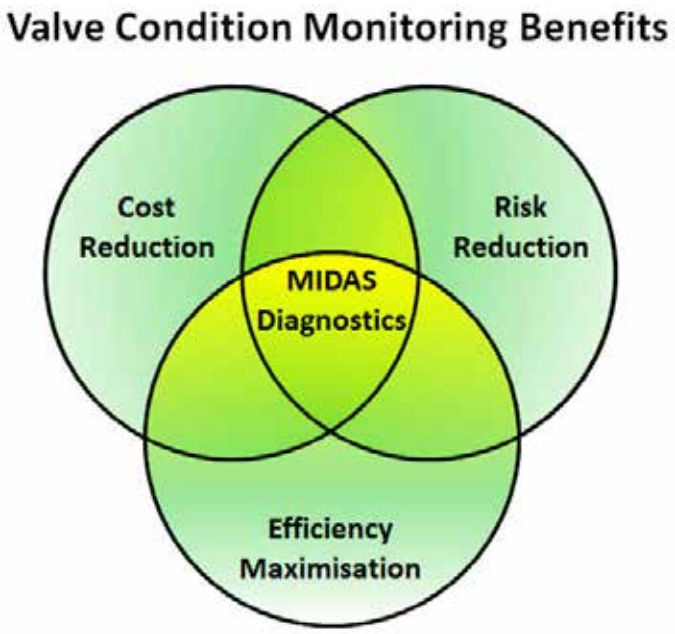
In a cost-base sensitive marketplace, who would not want that?

In this, part 2 of Score's overview of the MIDAS® and V-MAP® Valve Monitoring range, we examine options which provide permanently installed and fully integrated valve monitoring solutions.

### A Permanently Installed, Intrinsically Safe Certified, Acoustic Emissions (AE) Valve Condition Monitoring Device

**Non-Invasively Monitor and Display, Quantify and Trend Through Valve Leaks via a DCS/SCADA/Other Graphic User Interface**

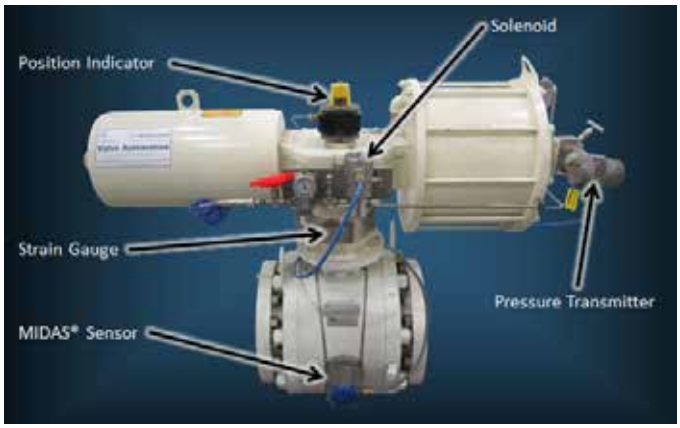
For more critical process valves, the MIDAS® Sensor (patent pending) has been developed to be installed directly on the valve and adjoining pipework, to give a continuous and permanent feedback indication of isolating valves' sealing performance in line. The sensor used is the same design as the MIDAS Meter® and the output from the unit's acoustic emissions (AE) sensor (a standard 4-20mA electrical signal) is designed to tie in directly with all plant's Digital Control Systems (DCS), or Supervisory Control And Data Acquisition (SCADA) Systems, or Score's own V-MAP® G3 System. This device is ideal for customers looking to monitor flare-line losses through isolating and pressure relief valves.




### Fully Integrated Critical Valve Condition and Performance Monitoring System

**Monitor performance against prescribed standards and trend Valve and Operator Performance over time. Report Indicators of any/all Developing Failure Modes**

For the most critical process valves, such as Emergency Shutdown Valves (ESDVs), Blow Down Valves (BDVs) and High Integrity Pressure Protection Systems Valves (HIPPS), where failure modes and effects other than basic through-seat leakage are important to monitor and trend, Score have developed a fully integrated, permanently installed system known as V-MAP® G3. The system, comprising sensors, instrumentation, and bespoke in-house manufactured data acquisition and signal processing equipment and software, as well as management/reporting software, continuously monitors all planned and unplanned valve strokes. Key indicators of valve and operator performance over time are reported in both statistical and graphical formats for further analysis. This system is ideal for customers looking to monitor the most critical valves in the process to ensure risks to personnel, plant, the environment and process losses are minimised.




## V-MAP® Case Study :-

Customer installed the V-MAP® system on 41 critical valves, with the aim of minimising the number of personnel interventions and process disruptions required at the plant for monitoring activities, whilst also maintaining the optimum level of safety integrity. This approach effectively assured the reliability of these critical valves and guided all maintenance activities, based on its analysis of current valve condition and performance.

As a result of the V-MAP® system reliably delivering the required added value, the customer made the decision to expand and install the system on a further 20 critical valves as part of the site expansion programme.

Full details of this and more case studies can be supplied on request.

Score (Europe) Limited

### Score Group plc / Score Diagnostics Limited

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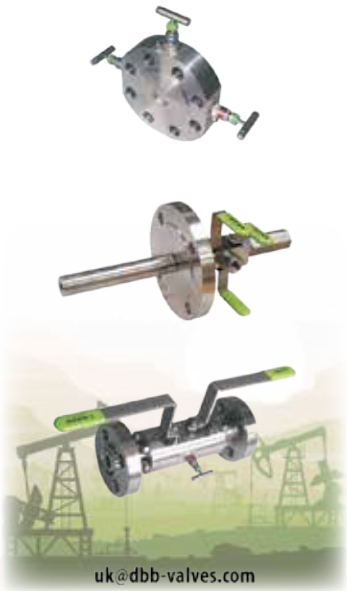


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# YPS Valves – Special Purpose Valves, Made in the UK

YPS Valves on site (above) and post production (below)

**YPS Valves** is a major UK manufacturer of special purpose valves for service within the oil, petrochemical, offshore, nuclear and other industries which require a high quality valve manufactured to the strictest quality and engineering standards.

All our UK manufactured valves are produced from UK foundries and forges and are identified by our distinct 'Made in the UK' nameplate.

YPS manufacture the Langley Gate, Globe, Swing Check, Wafer Check and Axial flor check valves in sizes from ½″ to 24″ and pressure rating ASME/ANSI 150 to 2500Lb. Our range of materials include alloy steel and stainless steel from a basic 304 grade through to Monel, Hastelloy, Inconel, Incoloy, Titanium and Zirconium.

Among the many adaptions to these designs include bellow seal, cryogenic and jacketed valves which can be supplied to individual customer requirements. YPS has the latest design facilities which include Auto Cad, Solid Works 3D design and finite element analysis which ensure our designs can meet the most exacting standards which meet ISO, ASME, API or custom specific specification.

The factory in Leeds, West Yorkshire has the capacity to specialist test and the facilities include low temperature testing down to minus 196 degrees, high temperature to plus 700 degrees and emission testing. For oxygen service valves the facility includes ultra-sonic cleaning and degreasing with the capability to accommodate valves up to 1000 kgs.

YPS Valves has been established for over 40 years and has a long history of producing high quality valves endorsed by our end user client list which include BP, Shell, Chevron, Sinopec, Exxon Mobil and many more.

**YPS Valves**
**Tel:** +44 (0) 113 256 7725
**Web:** www.yps-valves.co.uk

# James Walker and Teadit awarded Shell global supply contract for sealing products


From left to right; Diederik Neeb, Managing Director James Walker SPS and Chris Day, President of Teadit North America with Andrew Laird and Sumantra Dasgupta of Shell Global Purchasing.

Sealing product engineering specialists **James Walker** and **Teadit** have signed an Enterprise Framework Agreement with Shell Global Solutions International B.V. to supply the gasket requirements of all Shell and Shell joint venture sites in Asia, the Middle East, Africa, Russia, Australia, Canada and South America.


The contract covers an initial 5 year period with an option to extend for another five. In addition to supplying gaskets for the nominated areas James Walker & Teadit will provide Shell with a secondary source of supply across the remaining areas of the globe as well as meeting the sealing requirements for new projects throughout the company's upstream and downstream operations. In addition, the two suppliers will provide ancillary products such as compression packing, expansion joints, pipe grips and flange management services on a global basis.

The James Walker and Teadit partnership provides complementary geographical manufacturing and support locations and a combined product range that covers all requirements.

Diederik Neeb, managing director of James Walker Sealing Products and Services Ltd, spoke of the contract being a significant moment in the company's history; *'Being awarded a contract of this nature from a respected global business such as Shell is indeed a privilege and an event that will be a considerable driving force within our business for the years ahead. Our partnership with Teadit is also an exciting development – one that we hope will be the foundation of further opportunities for our two companies to collaborate across a broader range of industries and applications.'*

President of Teadit, Chris Day, was equally excited by the potential offered in the contract; *'Working together on a project such as this will bring significant benefits to both our companies in terms of sharing resources, materials knowledge, manufacturing best practices and expertise. This contract with Shell offers a unique chance to work alongside a recognised leader in material and product specifications for the oil and gas industry and hopefully take the opportunity to help drive towards future gains in sealing product safety and performance.'*

James Walker

**James Walker**
**Tel:** 01270 53 60 00
**Web:** www.jameswalker.biz

# Pioneering new 10″ LNG Transfer Systems delivered to **Excelerate Energy**

**KLAW LNG** has delivered two new LNG Transfer Systems to Excelerate Energy. This ground-breaking technology is the first LNG Hose Transfer System that combines the advantages of KLAW Flip-Flap Valve technology with controlled closure and the transfer rate benefits of a 10″ system.

The operational commissioning of the KLAW LNG Ship-to-Ship Transfer System on the Excelerate LNG vessel Exquisite.

KLAW LNG Hose Transfer Systems allow for the effective management of Ship-to-Ship LNG transfer and the close-down of flow and hose line separation in the event of an emergency. Activation of these emergency facilities are either automatic or through manual override procedures – depending on the circumstance.

The systems were commissioned on the Excelerate Energy vessels Exquisite in Dubai and Explorer in Pakistan during March and April 2015.

Each system consists of eight Emergency Release Couplings (ERCs), eight Twin Saddle Fall Arrest Systems, Hydraulic Power Control Units (HPUs), eight Y-Pieces and Valve 23 Vessel Separation Detection Units.

KLAW LNG Flip-Flap Valve ERCs provide a much more compact and lightweight solution compared to alternative designs. The Flip-Flap Valve delivers minimum headloss and a reputation for reliability and unrivalled operational performance.

Close-up of the KLAW LNG ERC in operation on the Excelerate LNG vessel Exquisite

The HPU provides control and management over the system and contains both automatic and manual functionality along with sequence and backup facilities. The Valve 23 Vessel Separation Detector delivers Emergency Shut-Down ESD-1 and ESD-2 sequences in the event of vessel drift.

LNG (Liquefied Natural Gas) is Natural Gas in a liquefied state. LNG is achieved by reducing the temperature of the gas to a cryogenic state of approximately –162 °C (–260 °F). LNG takes 1/600th the volume of natural gas in its gaseous state which means that in terms of volume, it is easier to store and transport. The reliability and performance of safety critical systems such as that provided by KLAW LNG is crucial to the future of LNG transfer where the management of safe cryogenic media transfer requires a particular standard of engineering expertise.

Many hundreds of commercial LNG transfers have been safely and efficiently conducted using KLAW LNG transfer systems. KLAW LNG has been involved in the development of safe LNG transfer solutions from the very beginning when back in 2006 the first ever commercial offshore Ship-to-Ship hose transfer of LNG was completed when eight cryogenic KLAW LNG ERCs were commissioned by Excelerate.

KLAW LNG also provides LNG Transfer Systems for Ship-to-Shore, LNG Bunkering (refuelling vessels with LNG), and LNG Emergency Response Systems. Systems can be large or small scale with sizes ranging from 4″ to 8″ and 10″.

Excelerate Energy has a reputation for innovation and was the first to deliver a Floating Storage and Regasification Unit (FSRU) to market. Excelerate has pioneered ship-to-ship transfer of LNG and now operates the largest fleet of FSRUs in the world.

KLAW LNG is part of the Signum Technology Group and the success of the 10″ LNG Transfer System project is a natural consequence of the Signum strategy which is to build a family of quality businesses through a 'buy and build' acquisition strategy that enables businesses to realize their potential.

Phil Clifton CEO of Signum Technology, commented. *'Despite the extremely tight deadlines and technical challenges, the KLAW LNG engineering team delivered these two fantastic systems on-time and within budget; systems that will provide unrivalled performance in the safe and efficient transfer of LNG.'*

With its considerable investment in research and product development, KLAW LNG is confirming its technical leadership in the field of safe LNG Transfer.

KLAW LNG

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# Cutting tool training pays dividends at **Pneumatrol**

Established over 50 years ago Lancashire-based **Pneumatrol** has become a leading manufacturer and solution provider of pneumatic and electro-magnetic valves, with customers across the globe using its products across the Process, Rail, Energy and Industrial market sectors.


The training has increased efficiency and quality at the business

Like many companies with such a history Pneumatrol employs a mix of skilled people, ranging from highly experienced setters, through adult NVQ trainees, to young apprentices. Each of these groups has a different approach to the application of cutting tools, so the decision was taken to bring them all together for an intense training session provided by WNT (UK).

To ensure that it meets the demands of its global customer base Pneumatrol has a policy of ongoing training as an integral part of its business model. During a review of its machining processes it came to light that much of the application knowledge of the older skilled setters needed updating, and concerns were raised that the younger apprentices were not being taught the best way to utilise modern cutting tools. The solution was to work with WNT (UK) to provide up to date knowledge of cutting data for all staff responsible for programming and setting the various turning and machining centres. *'Bringing all of our people together at the same time enabled WNT to present the training in a structured way, which made perfect sense to us. The result is that we are already seeing the benefits,'* says Paul Brammer, Pneumatrol's Machine Shop Manager.

Since the training day Pneumatrol has started working through its portfolio of pneumatic valves and reviewing all of the cutting data, the results so far have generated significant savings in both consumable tooling costs and more specifically cycle times. *'Our first task was to look at specific long-running jobs and without changing any of the tools that we use, simply looking at the cutting data on these first 12 components we have reduced the average cycle time per component by around 84 seconds. Given the volumes involved that equates to almost 1800 hours/year saving, simply by applying the optimum cutting speeds and feeds,'* says Paul Brammer.

The task now is to work through the rest of Pneumatrol's catalogue of parts and replicate these savings where possible. The reduction in cycle time is only one part of the benefits gained from the WNT training. Applying the correct cutting data has also seen improved surface finishes. The machine tools are also faring better as they are not working as hard and tool life and swarf control has also improved, reducing consumable costs and also having an impact on the lights out weekend running that Pneumatrol operates.

*'Our consumable tooling bill has fallen by around 38 per cent since the training thanks to the improved performance of the existing tools.'* says Paul Brammer.

pneumatrol

**Pneumatrol Ltd**
**Tel:** 01254 872 277
**Web:** www.pneumatrol.com

# Exciting New Aberdeen Appointment for **Pressure Tech**

## It is exciting times for **Pressure Tech** as they welcome Andy Carruthers to their expanding team.

Andy has recently joined Pressure Tech as a Sales Engineer and will be responsible for providing Scotland and the Nordic countries with his technical expertise and knowledge. Pressure Tech manufacture and supply components to the oil and gas industry worldwide - this is the first time they have appointed a field-based Sales Engineer in the North of the UK.

Managing Director of Pressure Tech, Steve Yorke-Robinson says, *'Andy has joined Pressure Tech at an exciting time for the company. We are currently expanding our technical team and sales force and we are thrilled to have been able to open up a field-based position, based in Aberdeen. We supply our products worldwide and because we are a rapidly growing company, it makes sense to have some presence in the North of the UK. Andy has over five years' experience of working within the oil and gas industry and brings with him a significant skill-set to what is a relatively niche market. Andy was already aware of our products from his previous role with another company and he specialises in hydraulics and instrumentation. He came highly recommended to us as a skilled technical sales engineer and with his great customer service skills and expansive technical background he has already proved to be a valued member of the Pressure Tech team.'*

Andy's previous position was with Hydrasun (a specialist solutions company for the energy and petrochemicals market). After joining Hydrasun, he quickly worked his way up the career ladder moving from Customer Services Advisor, onto the more specialized role of Hydraulic Technical Support, then promoted again to Customer Account Manager. This collectively gave him valuable technical & commercial knowledge - poising him perfectly for his current position with Pressure Tech.

He is currently studying Mechanical Engineering and has lived in Aberdeen for over seven years.

Andy Carruthers

Pressure Tech are based in Derbyshire and also have offices based in Houston, Texas - all of their products are manufactured in the UK. Since their formation in November 2000 they have developed an extensive range of high quality stainless steel pressure regulators for use on gas and liquid applications. They work closely with their customers and listen to their specific needs which has helped ensure they design products that provide accurate control to their systems, with long term reliability in service. They are quickly being recognised as a market leaders in the supply of quality pressure regulators.

PRESSURE TECH

**Pressure Tech Limited**
**Tel:** 01457 899 307
**Web:** www.pressure-tech.com

# **Hydravalve** – Lean Efficiency Reaps Rewards

**Hydravalve** of Willenhall, West Midlands have recently installed three Kardex Remstar Shuttles'. The purpose of the shuttles' is to optimise utilisation of storage space in a compact footprint. Consequently, increasing the storage capacity by 30% to meet the growing demands of the business.

The Kardex Remstar Shuttle XP is an automated high bay warehousing system with a modular design operating on the "goods to person" principle. This technology has aided to reduce both the physical demands of the warehouse activities, as well as allow for lean production, which is simply getting more from less.

Lean production involves eliminating waste and therefore using less space and time. The Shuttle XP enables Hydravalve to benefit from both these factors.

Firstly, faster order picking. The shuttles' sort the products in optimised sequences to minimise machine runtimes. Subsequently, dramatically decreasing picking times that benefits both the customer and company. Therefore, multiple orders can now be fulfilled at the same time, resulting in batch picking increasing as much as 200%.

Secondly, saving space. The Shuttle XP enables for a high capacity in a small footprint to be implemented. Compared with conventional methods, the system only requires a footprint that is up to 80% smaller. According to Hydravalve, by utilising the vertical space from floor to ceiling, unexploited space is eliminated, and approximately 25% floor space is recovered.

Surprisingly, there is an additional benefit with this system, error prevention. The system reduces the minor possibility of a customer receiving the wrong product, thus improving efficiency. The Shuttle XP indicates the precise location within the carrier of the item to be picked, displays the part number or description and specifies the required quantity. The shuttles' can also display a photo image of the required item, giving the picker a clear visual to help verify the correct item has been picked.

The Kardex Remstar Shuttle XP is an automated high bay warehousing system

Hydravalve states that strategic investment in equipment is at the forefront of the business.

*'We are continually seeking to improve efficiencies. Naturally we will be able to offer our customers a wider range of products and ensure our customers gain the highest quality of products at the lowest price possible.'* Says Andy Newham.

So the next time that you need valves and fittings, whether for standard applications or something out the ordinary, remember Hydravalve, as you might be surprised at the product range available.

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**Email:** sales@hydravalve.co.uk
**Web:** www.hydravalve.co.uk

# Switch to **Rotork** restores reliability on River Thames weir

## **Rotork** IQ3 non-intrusive intelligent electric actuators have been chosen for the operation of radial gates on an important river management weir on the River Thames.

Hambleden Weir plays a critical role in maintaining the level and flow in an area that is used extensively for recreational activities, including the stretch of river that hosts the world famous Henley Regatta. The reliable operation of the radial gates is a vital requirement for effective river management, especially with the varying weather conditions and increased risk of flooding experienced in recent times.

The Environment Agency had been encountering numerous reliability problems with the eleven electric actuators previously installed. Lock Keeper Simon Shepherdson explained: *'Most of the problems resulted from inadequate environmental sealing, which allowed rainwater to get inside the actuators and damage electrical components. In practice this often meant that an actuator would work on some days and not others.'*

Rotork IQ3 electric actuators and MTW gearboxes have been installed on Hambleden Weir on the River Thames.

The sealing problems were aggravated by the design of the actuators' manual operating mechanism, which sometimes would not work against the heavy weight of large radial gates.

There had been many attempts to upgrade the actuators with spare parts, but they had met with little success. It was therefore decided that replacing them with double-sealed Rotork actuators would be the best solution.

Working for the Environment Agency, Integrated Water Services awarded the turnkey contract to Rotork Site Services. Rotork's proposal encompassed all aspects of the task in an extended scope contract, enabling them to organise the total supply of the work together with project management services.

These responsibilities encompassed the removal of the existing actuators and gearboxes, fitting Rotork IQ3 actuators and MTW gearboxes, cabling and commissioning. New junction boxes were fitted adjacent to each actuator enabling existing cabling to be used wherever possible to avoid additional expense. Beginning in the autumn of 2014, the project has been completed on time and within budget.

The new actuators are Rotork's latest IQ3 units, featuring non-intrusive setting and diagnostic data management and fitted with 4-20mA signal input and output capabilities to facilitate possible further automation upgrades in the future. IQ3 actuators also feature a robust direct-drive handwheel mechanism, capable of moving the heavy gates if manual operation is ever required.

Combined with non-intrusive setting and commissioning, the IQ3's double-sealed IP68 watertight and temporarily submersible enclosure specification permanently protects internal electrics from the ambient environment, even during site wiring. The double-sealed design, whereby the terminal compartment is separately sealed from the rest of the actuator, has been a standard feature on Rotork electric actuators for over forty years and is proven to increase long term reliability, durability and availability in the harshest of climates.

Simon Shepherdson summed up the changeover to Rotork by saying *'The upgrade has given me the peace of mind of knowing that I can now operate the weir with confidence, without the worry and uncertainty that I was previously experiencing.'*

This project is one of an increasing number that have been awarded to Rotork Site Services for the upgrade and automation of river weirs owned by the Environment Agency or in private ownership.

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# Open Day a **Huge Success**

**ValvTechnologies Europe**, UK-based distributor of ValvTechnologies products and part of **MCE Group's** valve shutdown and repair service centre, recently hosted customers, prospects employees and suppliers at their recently renovated facility in Stockton-on-Tees.


The event celebrated their newly updated repair shop and included a tour of the facility and presentations showcasing the new machines and technology. In addition, attendees were treated to a barbecue lunch and enjoyed a fantastic cake!

The event, which was hosted by ValvTechnologies Europe with MCE Group plc had a fantastic turnout to celebrate the newly updated shop and satellite agreement with ValvTechnologies. A full range of pictures from the day are available on www.valv.com and the company's Facebook page.

The Open Day was held from 11:00 AM– 2:00 PM at the ValvTechnologies Europe headquarters, Pennine House, Concorde Way, Stockton-on-Tees, TS18 3TL.

*'This event is a perfect opportunity for anyone interested in ValvTechnologies products or service capabilities to come and see what the company has to offer, ask questions and meet the management team and staff,'* said General Manager Benny McCallum. *'Open Day is a great way to explore the benefits ValvTechnologies can offer our customers.'*

MCEGROUPplc

**MCE Group, plc**
**Tel:** 01642 882 211
**Web:** www.mceplc.com

# SMC UK Announces New Managing Director

**SMC Pneumatics** (UK) Limited announces that after seventeen years leading the company, Steve Bangs has stepped down from his position as Managing Director. He is succeeded by the company's Assistant Managing Director, Kevin O'Carroll. The changes took effect from 1st May 2015.

Steve Bangs joined Milton Keynes-based SMC as Sales Manager in 1984. He was appointed Managing Director 1998 and under his strong leadership, the UK subsidiary of Japanese-owned SMC Corporation has grown and survived significant global economic challenges. In 2014 he was promoted to the main board of Directors of SMC Corporation, with responsibility for SMC's European operations. He will continue working for SMC in the capacity of Corporate Advisor.

Kevin O'Carroll takes over as Managing Director having gained experience in many of SMC UK's functions during a 28 year career. After serving an engineering apprenticeship with Vauxhall, Kevin joined SMC in 1987 - attracted by an extensive, innovative product range and SMC's reputation in the marketplace. He gained experience in several key areas of the business, culminating in promotion to Head of Operations in 1996, Assistant Managing Director in 2009 – and now, Managing Director.

Kevin O'Carroll

Speaking of the handover, Steve Bangs commented: *'After 31 years with SMC, it's been very gratifying to be a part of the success and growth we have achieved. One thing that has stood out for me is the enthusiasm and support I have received from all of the staff here – support that I know Kevin will be able to rely on as he takes the reins.'*

Kevin O'Carroll says he has no plans to make radical changes. *'Steve will be a hard act to follow.*

*'Our continued success is down to a number of factors, not least our excellent workforce and our constant investment in new product development. In the UK we follow the Japanese ethos and strive to build trust and respect with our customers and our employees. Over half of our employees have been with us for more than ten years and this stability gives us an excellent skills base plus the flexibility of a committed workforce that are willing to accommodate workflow changes. The calibre of our people in the UK is appreciated throughout the corporation and many of our team over the years have been actively sought out to work on European and Global projects to support SMC.'*



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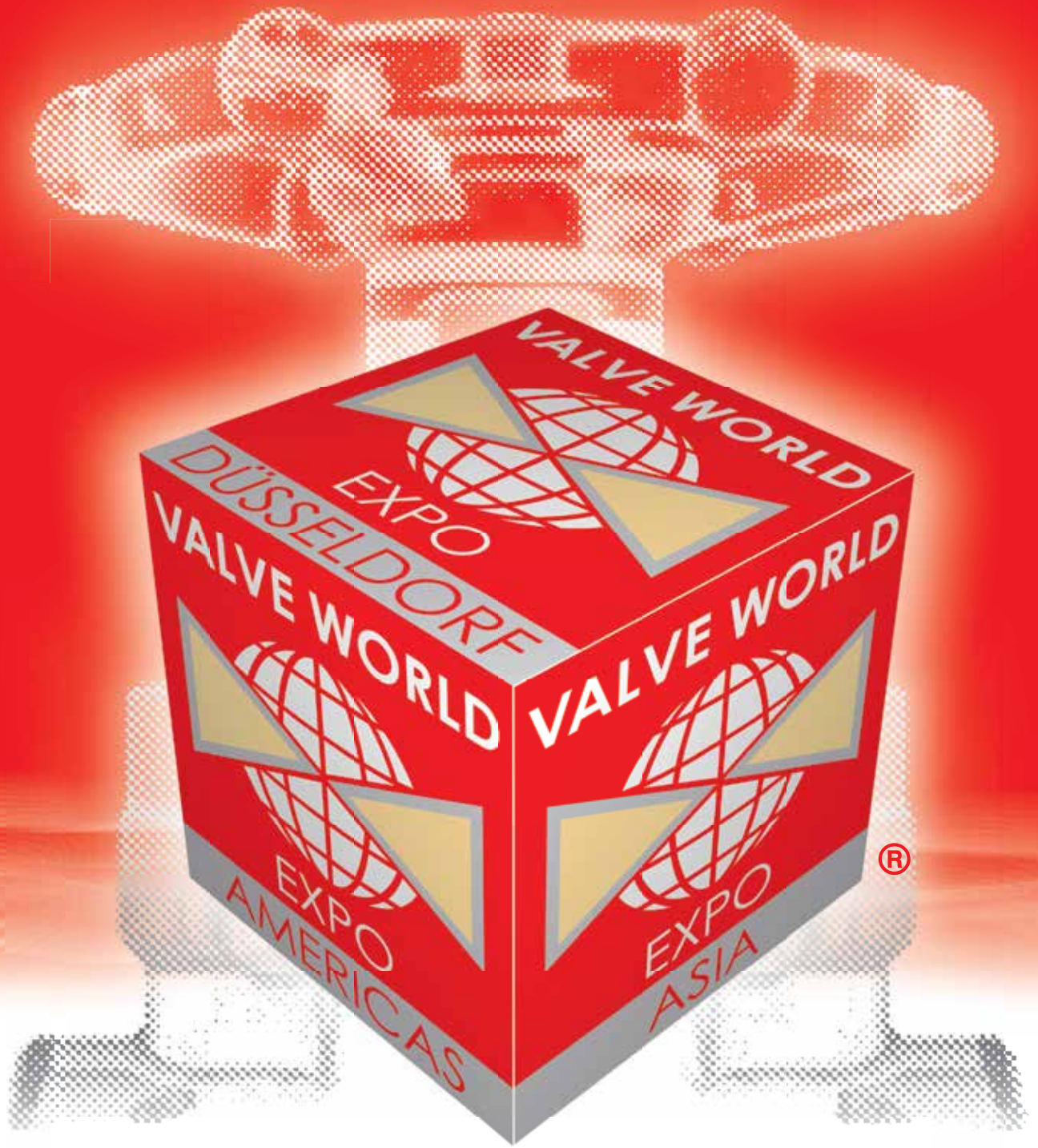


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# **Mokveld** Opens New Head Office

**Mokveld Valves BV**, expert in engineered valve systems for the worldwide oil & gas markets, has opened its new head office in Gouda, The Netherlands.

Mokveld HQ, Gouda, The Netherlands

To support the continuing growth of Mokveld, a brand new state-of-the-art 3000 square meter head office opened this January. In addition, the factory was expanded with a new 500 $m^2$ section for IFAT, FAT and freight forwarding. A part of this factory expansion we are now constructing new, fully equipped test bunkers to accommodate the ever more stringent valve testing and quality requirements.

*Mokveld has over 50 years of experience in designing and manufacturing bespoke valves for the world's oil and gas industry*

Mokveld has over 50 years of experience in designing and manufacturing bespoke valves for the world's oil and gas industry. With a current staff of over 370, the growth of Mokveld is largely owed to the innovative and quality driven nature of the company. With the office and factory expansion Mokveld ensures its position as a leading manufacturer of mission critical valve systems for demanding control and safety applications.

## Mokveld and Abbon Join Forces

Mokveld Valves BV and Abbon AS, a technology company providing innovative multiphase measurement solutions have decided to join forces.

With the investment in Abbon's multiphase flow measurement technology Mokveld expects to better serve the growing markets for recovery optimization and asset management.

Abbon, located outside Oslo, Norway, was founded in 2004 and currently has a staff of 10 employees. Abbon has developed a cost-effective, compact, easy to install, non-radioactive multiphase low meter with the patented TWINFLOW™ technology enabling oil and gas operators to optimize production and increase recovery rates per well. Abbon will continue to operate under its own name; as member of the Mokveld companies group it will receive the backing of a partner with expertise in marketing and manufacturing equipment for the oil & gas market enabling seamless commercialisation of the Abbon 3PM flow meter.

mokveld

**Mokveld UK**
**Tel:** 01285 700 719
**Web:** uk@mokveld.com

# STICK TO THE FACTS


**The USB stick connectivity of the SIPOS SEVEN valve actuator means easier site commissioning and maintenance**

One small device for the valve manufacturer and contractor, but a giant leap for the industry. The USB interface is the key to several SIPOS SEVEN innovations – enhancements which will simplify power plant projects for both valve manufacturer and contractor:

- Process control set-up without mains supply via laptop or USB battery
- Non-intrusive commissioning
- Easy upload/download of parameters for easy commissioning or cloning

Three benefits amongst many, delivered by the market leader in variable speed actuation.

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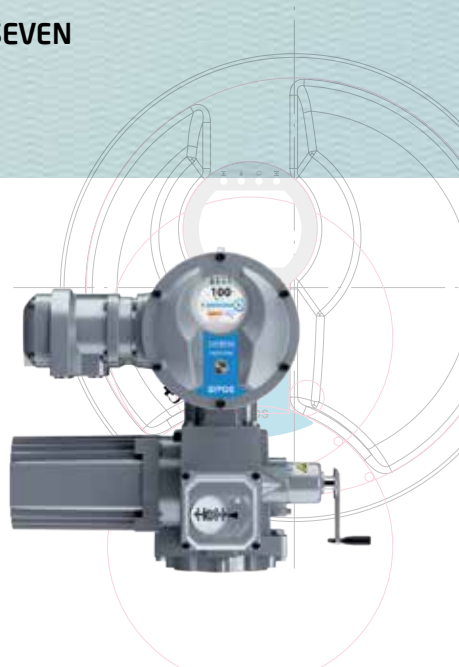

STAY AHEAD. STAY SIPOS

info@sipos.de, www.sipos seven.com

# Is Static batch sampling **a thing of the past?**

Incorporating **Process Analytical Technology** (PAT) into a reactor bottom outlet valve, using the MultiProbe® - SchuF PAT Solution allows analysis, and control to be carried out by taking measurements DURING pharmacetical and chemical manufacturing.


The use of PAT probes enables real time knowledge of the critical process control parameters such as reaction initiation/endpoint, reaction progression, Intermediate formation, concentration, yield etc.

The aim is to reduce production cycling time and product sampling, preventing rejection of batches; as any problems arising can be corrected or stopped before energy and valuable medium is wasted.

While taking timely measurements (during the process) is not new, in the past there have always been issues.

One of the biggest of these challenges is finding a suitable point for a probe to enter the reactor vessel; modifying a vessel is expensive, requires revalidation and may not be permitted due to the vessels structural integrity being compromised.

Entry via the vessel top would seem to be a better option than compromising the fabric of the vessel, but longer cables can lead to significantly less reliable signals from the probe. Other options that have been tried to lesser or greater success include the incorporation of PAT probes into recirculation sampling loops, but this raises safety concerns about residue in flexible hoses and problems handling slurries.

It took an innovation from SchuF, the market leader in drain valves for pharmaceutical and chemical applications, to provide an easy to install, accurate, reliable and effective solution to all the old challenges; enabling manufacturers to access process analysis data directly through the reactor bottom outlet by using a specially designed valve that incorporates a PAT probe.

The PAT probe protrudes through the valve actuator, stem and disc, to perform measurements in the body of the liquid held in the reactor.

Because the probe has to be directly exposed to the medium being analyzed SchuF's unique Multiprobe design ensures that the medium in the reactor does not leak into the valve spindle and that the probe can be removed quickly between batches without removing the valve from the vessel.

The use of PAT technology by incorporating a probe into the valve eliminates the need to either modify the reactor vessel or lower cables into the vessel -providing a very safe and comparatively low-cost solution to all the traditional challenges. (The solution can also in some instances be retrofitted in existing valves.)

The benefits of the SchuF MultiProbe are best summed up by one of our customers:

*'This relatively simple but innovative valve installation has the potential to significantly impact the business through reduced batch cycle time, improved quality and increased process robustness'*

As always SchuF valves that incorporate PAT technology using the MultiProbe arrangement can be built to a wide range of customer specifications including a wide range of materials such as hastelloy, glass and PFA lining; and all are designed to be compatible with numerous actuator types, sizes and accessories.

PAT tools come in various forms of immersion probes such as Infrared (IR) probes, Turbidity probes and PH probes for applications where direct insertion into a reactor vessel is required.

The full range of SchuF products including PAT compatible with Multiprobe are available exclusively in the UK from Valve & Process Solutions Ltd.

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# **K Controls** Valve Position Monitors certified for USA & Canada

## **007-100** and **007-120** AExd and Explosion Proof Valve Position Monitors now carry the following certification:

### USA:

Class I, Divisions 1 & 2, Groups B, C and D. Class II, Groups E, F and G. Class III. T4/T6; Type 4, 4X, 6 and 6P.

Class I, Zone 1, AEx d IIC T4/T5/T6. Zone 21, AEx tb/tD. IIIC T135oC/T100oC/T85oC. IP66/67/68 and/or Type 4, 4X, 6 and 6.

### Canada:

Ex d IIC T4/T5/T6. Ex tb IIIC T135oC/T100oC/T85oC. Class II, Groups E, F and G. IP66/67/68 and/or Type 4, 4X, 6 and 6P.

The enclosures are supplied in either coated aluminium or ANC 4B (316) stainless steel. NPT cable entries up to ¾″ are available.

The products have been designed to accommodate, as an option, the latest version of the top mounted highly visible Klearvision position indicator. It is directly driven from the input shaft, no internal gearing is required.

The 007-100 is a compact solution that can contain up to 2 switches or a 4-20mA position transmitter. Two point cover fixing reduces commissioning times. The larger 007-120 can contain up to 4 switches and a 4-20mA position transmitter.

Ambient temperature ranges have, where possible, been extended. Some AEx d and Explosion Proof versions can achieve -60°C to +70°C at T6 or -60°C to +120°C at T4.

Both Baseefa and CSA have issued K Controls with ingress protection test reports.

**Baseefa:** Enclosures have passed IP 66, IP67 and IP68 tests to EN 60529:1991.

IP 68 at a depth of 30 metres for 96 hours.

Standard units are rated IP66 and IP67. IP68 versions are available to special order.

**CSA:** Nema Enclosure Types 4, 4X, 6 and 6P.

For subsea use enclosures are available in a range of materials including carbon steel,


K Controls position monitors in coated aluminium (left) and stainless steel (right)

316L stainless steel, 254SMO stainless steel (20%Cr -18%Ni-6%Mo), Duplex 2205 and Super Duplex. Sub-sea connectors and cable can also be supplied.

There is a very extensive range of monitoring equipment that can be fitted in this range of Position Monitors.

Switch options include micro switches, hermetically sealed magnetically operated reed switches and standard or failsafe inductive proximity sensors. Potentiometers of various different values can be geared or directly driven. A solenoid back wiring facility can be provided so that switches and solenoid can be wired to the control room via a single multicore cable without the requirement for a separate junction box.

007-100 and 007-120's fitted with certain switches are suitable for both Low and High Demand scenario applications at SIL1 or SIL2 of IEC 61508. Versions fitted with Namur proximity sensors are suitable for both Low and High Demand scenario applications at SIL2 of IEC 61508. Versions fitted with fail safe proximity sensors and used in conjunction with safety rated barriers, are suitable for both Low and High Demand scenario applications at SIL3 of IEC 61508. Declarations of Conformity are available on request.

For continuous feedback of valve position or for monitoring the performance of critical emergency shutdown valves during partial stroke testing, 4-20mA, 4-20mA + HART®, PROFIBUS® PA or FOUNDATION™ FIELDBUS position transmitters are available in K4-20 variants.

Designed for use in the oil, gas and petrochemical industries these units can be fitted to a wide range of quarter turn or linear valve actuators.

Versions certified ATEX, IECEx or INMETRO are available for use in other parts of the world.

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# Major **SIPOS** actuator order for San Diego water authority


The SIPOS HiMod actuator is selected by San Diego County Water Authority.

The advanced capabilities of **SIPOS Aktorik's** electric actuators have enabled the company to secure a major order from San Diego County Water Authority (SDCWA) in California.

The HiMod product has been selected by the utility to assist with control of water flow to remote valves that support City agencies including San Diego, Escondido, La Jolla and Oceanside. Commissioning and ongoing support will be provided by AUMA Actuators Inc.

An initial order for seven SIPOS actuators were delivered in 2014 to SDCWA's Rancho Hydroelectric facility in San Diego and 90 additional devices are scheduled for delivery during 2015. The devices will be adopted on lines ranging from 36″ to 60″.

Commenting on the challenges met by the SIPOS HiMod actuator at the SDCWA installations, Justin Ledger, Marketing and Business Development Manager at AUMA Actuators Inc. said:

*'SDCWA required slow valve operation to decrease water hammer damage and this is an area of particular expertise from SIPOS. The actuators require long stroke times (23min) and heavy pulse modulation – this was addressed by the HiMod, which can be built for 120vac primary power and still provide continuous modulation. By contrast, other actuator lines only allow a maximum of 15 minute duty and minimal modulation for 120vac units.'*

SIPOS Aktorik is part of the AUMA Group. With strong representation in the USA, the company's electric actuators, backed by comprehensive local support, are installed across water, power and district cooling installations. The company's product range includes the SIPOS 5 electric actuator and recently launched SIPOS SEVEN series.

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# New guides announce **ABB's** service offerings for flow calibration and valve testing

ABB engineers

## **ABB's** flow and valve services explained by new publications

ABB's Measurement and Analytics business has released two new guides covering its services for flow calibration and valve testing. Available on request from abb.service@gb.abb.com, the guides explain how ABB's flow calibration facilities at its Stonehouse and Workington factories can be used to help check the accuracy of flowmeters and control valves.

For flow calibration, the facilities enable a wide variety of flowmeter types to be calibrated to the leading international standards. All calibrations are carried out to ISO9000, with the option of a UKAS accredited calibration where the certificate carries the ILAC and UKAS Calibration Laboratory 0255 logo.

The flow calibration guide explains how the facilities can be used to calibrate meter sizes from 1mm to 2.4 metres at accuracies down to ±0.1%. It also covers the range of calibration techniques available, including gravimetric, volumetric or comparison methods, describing each technique and explaining how to choose the right method.

The valve testing guide covers ABB's ability to test control valves from 25mm up to six metres and weighing up to 10 tonnes in accordance with the EN ISO 60534-2-3 standard for control valve testing. The guide explains the testing process and outlines the benefits of ABB's service, which enables valve users to ensure that their valves have been tested for their specific requirements.

Both services are offered via ABB's Measurement & Analytics Products Service team and are part of a wider service capability spanning ABB's entire portfolio of instruments and analysers.

*'The vital role performed by flowmeters, control valves or any form of instrument or analyser means that it is worth investing the money, time and effort in ensuring that devices are properly serviced throughout their lifetime, from installation and commissioning through to upgrade or replacement,'* says Mark Niblett, Measurement & Analytics Service Manager UK & Ireland.

*'Our flowmeter calibration and valve testing services are just two examples of our wider service offering, which can help our customers to enjoy continued accuracy and high performance from their equipment throughout its operational life.'*

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# **Leengate Valves** Sponsor Spireites


Leigh Pickering (commercial director, Leengate Valves), Spireites manager Dean Saunders and Steve Pickering (managing director, Leengate Valves). Photo by Tina Jenner

## **Leengate Valves** have agreed to sponsor the club's warm-up kit for the next two seasons.

The agreement extends the company's long association with the club. Leengate Valves sponsored the back of the shirts for nine years and they were also sponsors of the Legends Lounge until recently.

Commenting on the deal, Leengate Valves' managing director, Steve Pickering, said: *'We thought the time was right to look at sponsoring something else at the club and we are delighted to maintain our involvement.*

*'The majority of our business is not local so we look for ways of promoting the company as the team travels around the country. When the players are out on the pitch, warming up, our name is going to be spotted.'*

Spireites commercial manager Jim Brown said: *'Leengate Valves are valued sponsors and I would like to thank them for their continued loyal support, which is very much appreciated.'*

The UK's market leading wholesaler of valves, Leengate Valves offer comprehensive stocks from leading valve manufacturers at competitive prices. To find our more about the company, visit www.leengatevalves.co.uk.

Leengate Valves

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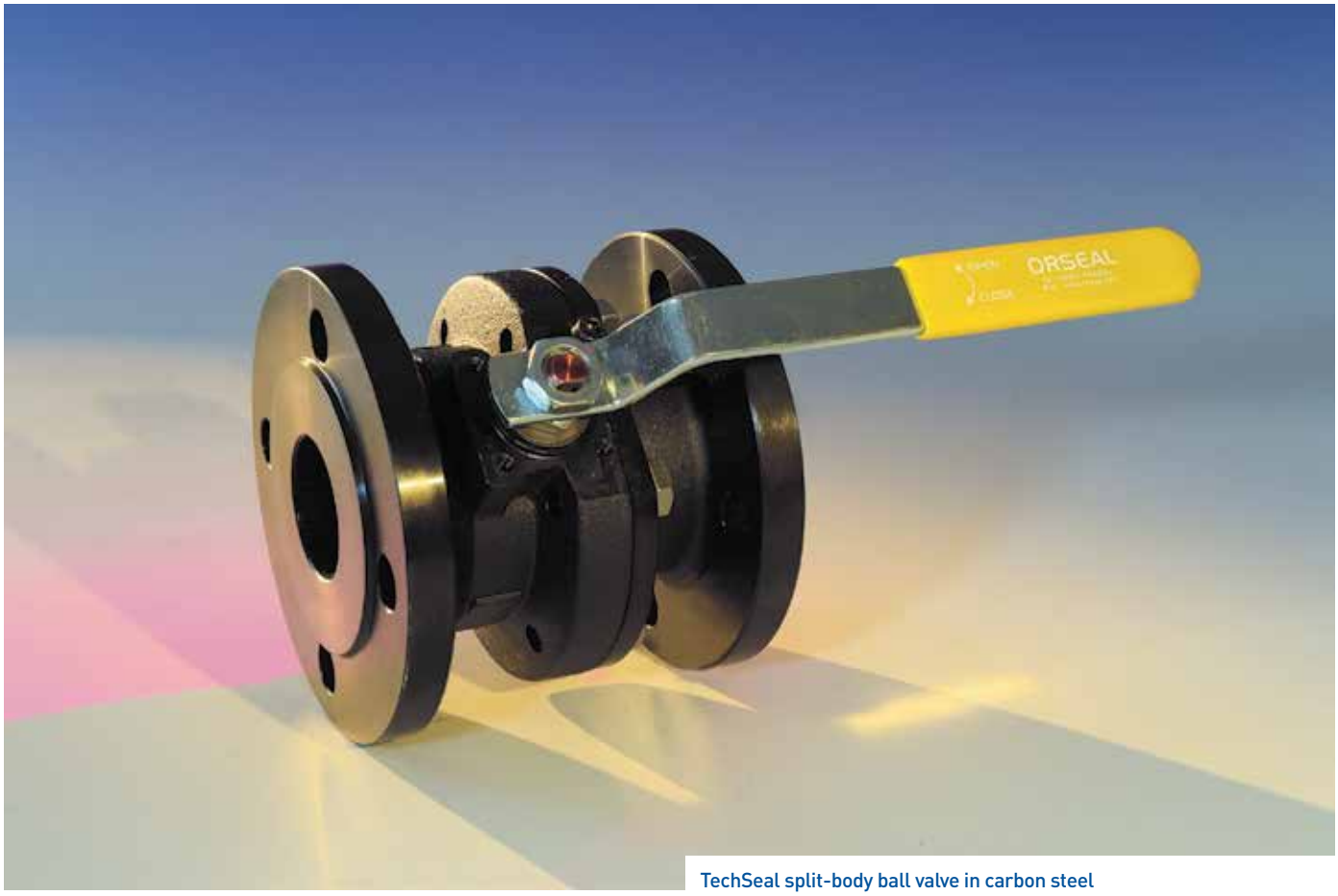
# **Orseal** Launches New Made in Europe Range




TechSeal split-body ball valve in carbon steel

## **Orseal's** new TechSeal valves take on low cost imports by combining premium quality with exceptionally competitive prices

A high proportion of European companies still turn to the Far East for industrial components, products and production facilities because of the lower costs – but now one European company is fighting back.

The new made-in-Europe TechSeal range from UK valve specialist Orseal combines quality with lean manufacturing techniques to deliver engineering excellence at exceptionally competitive prices.

The new valves, which are full bore not reduced bore, are in stainless steel and carbon steel. Fire-safe and anti-static, they are available in sizes ¾″ to 8″. They are suitable for a wide range of process industries including food and beverages, pharmaceuticals, gas, chemical plant and paint manufacture. TechSeal quality and fast delivery from the UK are guaranteed.

*The new valves, which are full bore not reduced bore, are in stainless steel and carbon steel*

**Orseal Limited**
**Tel:** +44 (0) 1204 474300
**Web:** www.orseal.com

# **Emerson's** New Butterfly Valve Combines Cost Savings With High-Performance

## **Fisher®** 8590 high-performance butterfly valve features a highly optioned, single design platform that reduces engineering, installation, operational and maintenance costs

Emerson Process Management introduces the Fisher® 8590 high-performance butterfly valve that brings a selection of disk seals, actuator designs and material combinations to meet plant-wide throttling and on-off requirements.

Ben Fletcher, product manager at Emerson, explained the design intent behind the 8590 butterfly valve. *'Our goal was to give application engineers the ability to combine a single valve platform with a selection of proven technologies to control a diverse range of CL600 process demands.'*

*'As an example, several dynamic disk seals are available in the 8590 design to meet temperature conditions that range from low-to-moderate up to 538°C (1000° F). Severe service and cryogenic applications can be met as well with the appropriate metal-polymeric or rugged stainless steel seal construction,'* Fletcher added.

The Fisher® 8590 high-performance butterfly valve

*'Since one valve design meets several needs, overall valve engineering, purchasing, installation, operation and maintenance costs are reduced.'*

Utilising a lugged body design across the CL600 size range of NPS3 – NPS24, the 8590 can incorporate a splined shaft that accepts either a spring-and-diaphragm or pneumatic piston actuator. It is also available with either a square or keyed shaft that combines with handlevers, handwheels or pneumatic piston actuators.

The pressure-assisted design of the 8590 disk seals provides tight shutoff and permits the use of smaller, less expensive actuators in meeting full ASME B16.34 shutoff capabilities.

The 8590 offers true bidirectional shutoff, which means that torque necessary to open and close the valve remains constant regardless of the differential pressure across the disk. Slam-shut conditions are not created as the disk nears its seat, which extends seal life and avoids actuator and piping damage.

Besides shutoff given by the choice of elastomer and metal disk seals, the optional ENVIRO-SEAL® packing system combines with the valve's micro-smooth shaft surface to keep emissions below 100 parts per million (PPM). Yet another extreme 8590 capability involves sour liquids and gases, with trim and bolting materials available to comply with NACE MR0175-2002, NACE MR0175-2002-2003, MR0103, and MR0175/ISO 15156.

With a CL600 rating per ASME B16.34, the valve's face-to-face dimensions meet EN558, API609, MSS-SP68, and ASME B16.10 standards. The valve body self-centres on the line flange bolts as a fast, accurate means of centring the valve in the pipeline.



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# **Hobbs Valve** to Celebrate 10 Years of Successful Trading

The open day, on the 2nd October, will be an opportunity to view Hobbs Valve's commitment to excellence

## **Innovative British Manufacturer** to hold open day on 2nd October 2015

Hobbs Valve, industry leaders in the design and manufacture of Triple Offset Butterfly Valves (TOBV), celebrate 10 Years in business in October 2015. UK based Hobbs Valve is at the forefront of innovation, producing high performance TOBV for global industries such as; Oil & Gas, Chemical, Petrochemical, Nuclear, Marine and Power.

### *'Different from the rest'*

Our innovative, patented range of TVT metal seated valves is designed, and developed in house using advanced precision engineering techniques and independently tested by accredited third parties. This ground breaking design produces optimum performance with the TVT Range of TOBV providing durability in highly intense applications. Different from the rest, the Hobbs valve design has overcome the age old elliptical geometry, inherent of two dimensional machining; our valve has circular sealing components, offering a circular orifice in-keeping with the geometry of the adjoining pipe. We have also removed the need for pins and keys throughout the drive-chain, making for a simple assembly and maintenance process. The simple yet clever design of the drive-chain allows for greater durability under extreme high and low temperatures.

The Company is ethically committed to achieving excellence in standards of design, customer care, professionalism, quality and safety through the continual development of our products and services. Implementation of internationally recognised accreditations such as Quality Standard ISO 9001:2000 (2008) and PED 97/23/EC ensures we are continually striving towards promoting safe working practices and environmentally in line with OHSAS 18001 and ISO 14001.

The company open day on the 2nd October 2015 is a great chance to see Hobbs Valve's commitment to excellence first hand. Chairman Alun Hobbs commented:

*'The open day on the 2nd of October is a great chance for us to celebrate with suppliers, customers and friends who have help make the last ten years a success. Everyone is welcome to come along and share a glass of bubbly, a buffet lunch, live music and other entertainment.'*

### Hobbs Valve Products:

- Double Block & Bleed Valves
- Butterfly Control Valves
- Butterfly Valve – Cryogenic (-196°C)
- Butterfly Valve – Metal Seated-Fire Safe
- Butterfly Valve - High Performance
- Butterfly Valve - Isolating
- Butterfly Valve - Modulating
- Butterfly Valve - Standard Control - Class IV
- Integrated Bypass
- ESD Valve Systems
- Steam Jacketed Valves
- 2″ through 48″ - 150lb - 300lb - 600lb (Others on request)

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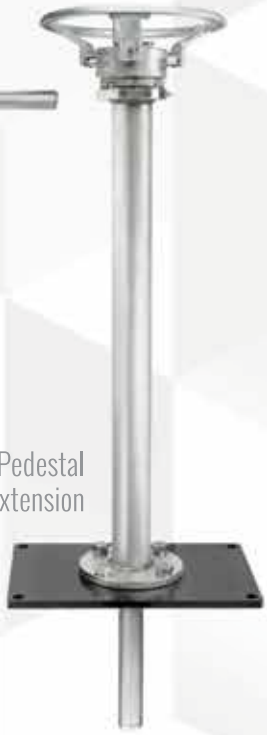











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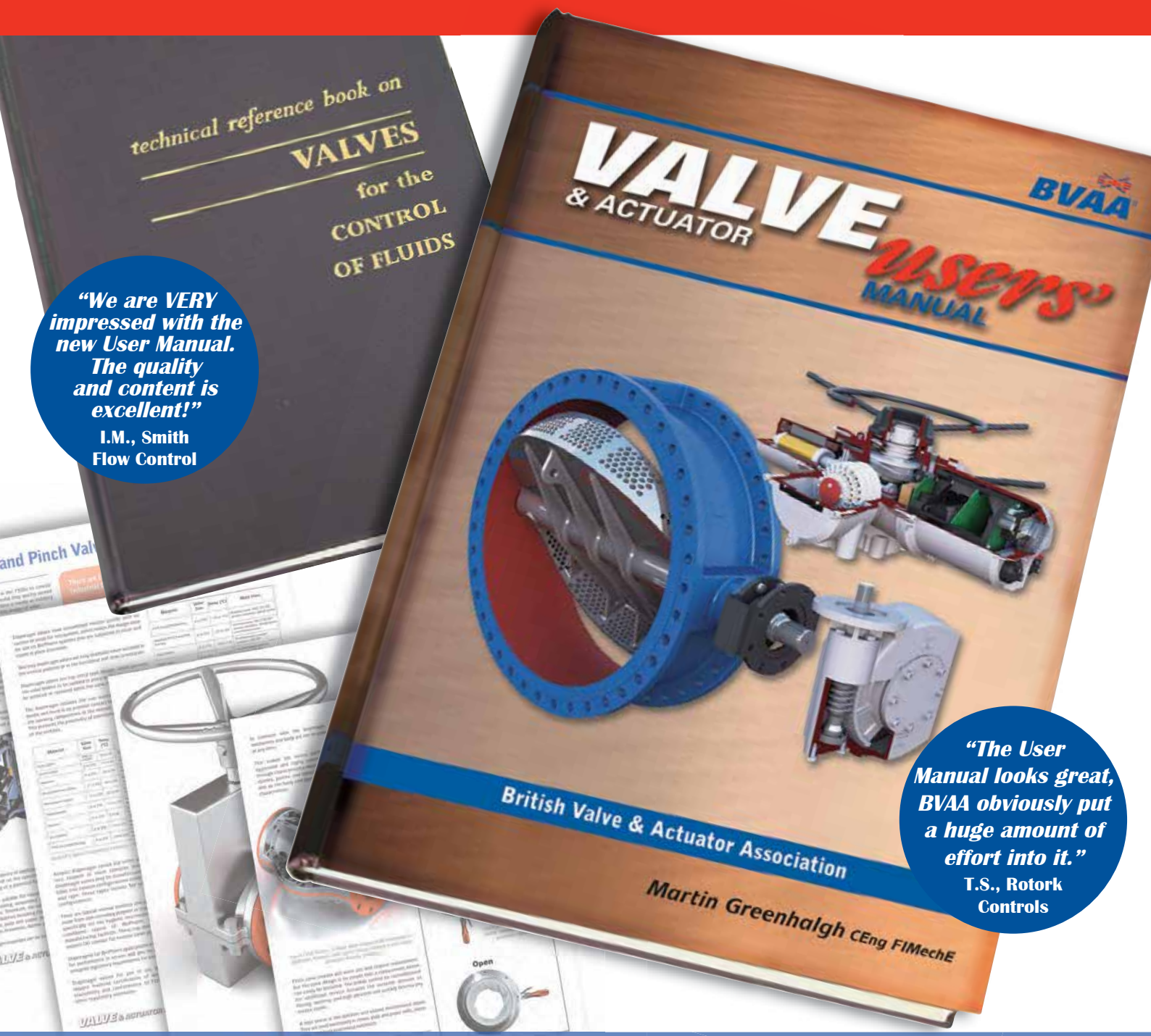


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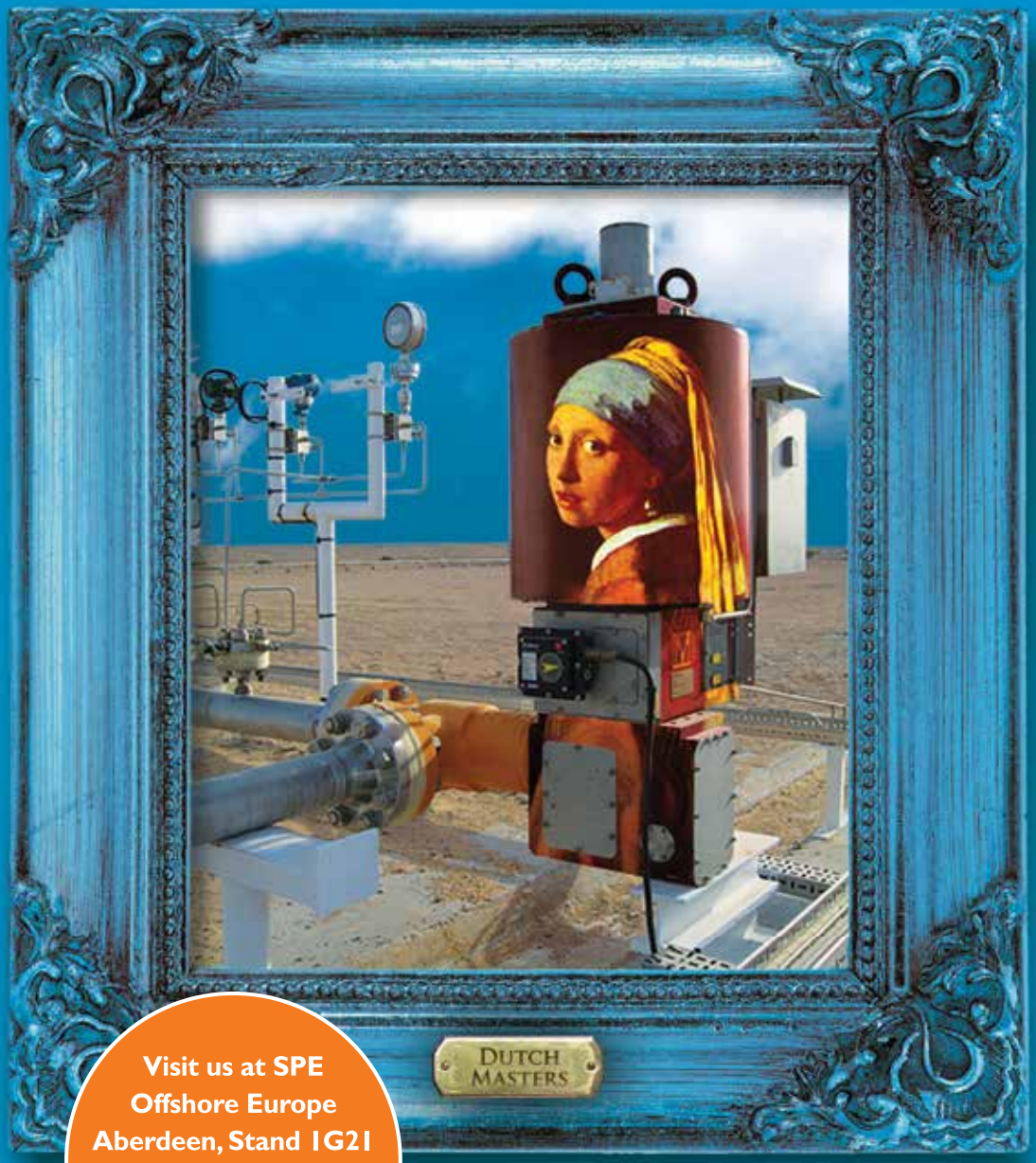


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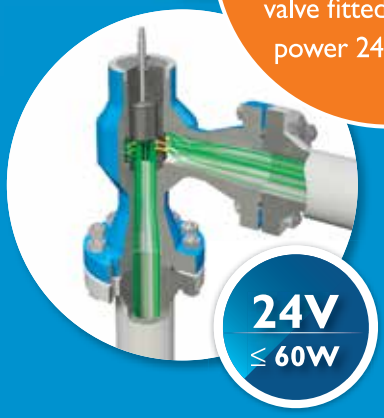


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