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British Valve & Actuator Association



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VALVEuser® is a controlled circulation magazine, free of charge to genuine users of valves, actuators and related products and at the discretion of BVAA Ltd.

Welcome to the latest edition of Valve User magazine!

It's no coincidence that my Comment in this issue reflects the front cover photo, and the subsequent story on page 72. Indeed, there's so much continual improvement in the British Valve industry at the moment, it's pretty hard not to talk about it!

Valve User was created primarily as a vehicle for BVAA members to promote their companies' new products, but more and more we see members using their opportunities to promote the huge improvements they are making in what are already rightly considered world class businesses.



by BVAA Director, Rob Bartlett

In the bad old days, 'improvements' was usually a management euphemism for initiatives that came without consultation with the workforce. It is so refreshing to see company staff, from all levels, backgrounds and disciplines, play a pivotal role in the development of new factories and services these days. And they're making an excellent job of it too!

When I was a lowly QA Engineer, it used to be trendy to quote 'Kaizen' as if it were some deep, mystical martial art or a heightened state of awareness, but contrary to popular belief the word didn't have any particular connection with 'continuous' or indeed a 'perfection' philosophy. It just meant literally 'improvement'. The continuous nature of improvement in an industrial sense however really comes from the companies and individuals they employ and the attitude they adopt. Making it sound a bit exotic probably helped its adoption, but it's grounded in a desire and willingness to improve, for our own and our customers' sakes. The appointment of 'Improvement Managers' is a most welcome development, something inconceivable to me when I struggled to implement the forerunner of ISO 9000 in my company.

Look around the British Valve industry at the moment and you see an industry at the top of its game. Order books are robust, but then so are the technical and commercial requirements companies are obliged to meet in order to get a chance to win – and then expedite - those orders. You really need to be 'world class' these days to even get a chance of quoting. But there is a constancy of purpose inherent in the British Valve industry. As well as meeting customers' current needs, we're all striving to anticipate and meet future requirements too. Continuously!

Did you know?

As well as a printed copy, VALVEuser magazine is also available as an email attachment, and as a download from BVAA's website, www.bvaa.org.uk

Cover: KKI's Aftermarket Team designed their own workspace, see page 72 for full story



BVAA®

World Class Valve Training Courses



Huge Discounts For BVAA Members



These courses are a **MUST** for those involved in the engineering industry who need to know about valves and actuators. BVAA valve courses are delivered by our lecturers who have tremendous knowledge and experience of the industry. The sessions always result in comments of the highest praise.

Introduction to Valves

Monday, 11th March 2013
Banbury, £360+vat

Introduction to Valve Actuators

Tuesday, 12th March 2013
Banbury, £360+vat

Control Valves

Wednesday, 13th March 2013
Banbury, £360+vat

Safety Valves

Thursday, 14th March 2013
Banbury, £360+vat

Safety Integrity Levels (SILs)

Friday, 15th March 2013
Banbury, £360+vat

Managing Commercial Risk

Monday, 18th March 2013
Banbury, £450+vat

PED & ATEX Directives

Tuesday, 19th March 2013
Banbury, £360+vat

Fluid Sealing

Wednesday, 20th March 2013
Banbury, £360+vat

Diaphragm Valve MasterClass

Thursday, 21st March 2013
Cwmbran, £360+vat

"Good and pitched at right level"

Shaw Valves

"Very good with lots of experience and knowledge"

BP

"Professionally done"

British Energy

"Good - clear, concise and knowledgeable"

Titanium International Ltd

"Friendly and funny, explained concepts in laymen's terms, making the course easy to understand"

AMEC

Tuesday,
16 April 2013

Business Growth Workshop

This course is ideal for anyone who has the responsibility of business growth, either to new or existing accounts, engineers, sales people, account managers, business development executives.

Find out how to increase sales revenue, either by winning new customers or increasing the average transaction value; while at the same time building long term relationships and getting repeat orders.

£395 +VAT for members, £450 + VAT for non-members

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

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BOOKING FORM

BVAA Training Courses

Please complete the form and return to Karen Webb.

All training courses are one day duration.

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

- **Introduction to Valves: Members** - £240.00, **non-members** - £360.00 - Monday, 11th March
- **Introduction to Valve Actuators: Members** - £240.00, **non-members** - £360.00 - Tuesday, 12th March
- **Control Valves: Members** - £240.00, **non-members** - £360.00 - Wednesday, 13th March
- **Safety Valves: Members** - £240.00, **non-members** - £360.00 - Thursday, 14th March
- **Safety Integrity Levels (SILs): Members** - £240.00, **non-members** - £360.00 - Friday, 15th March
- **Managing Commercial Risk: Members** - £395.00, **non-members** - £450.00 - Monday, 18th March
- **PED & ATEX Directives: Members** - £240.00, **non-members** - £360.00 - Tuesday, 19th March
- **Fluid Sealing: Members** - £240.00, **non-members** - £360.00 - Wednesday, 20th March
- **Diaphragm Valve MasterClass: Members** - £240.00, **non-members** - £360.00 - Thursday, 21st March
- **Business Growth Workshop: Members** - £395.00, **non-members** - £450.00 - Tuesday, 16th April

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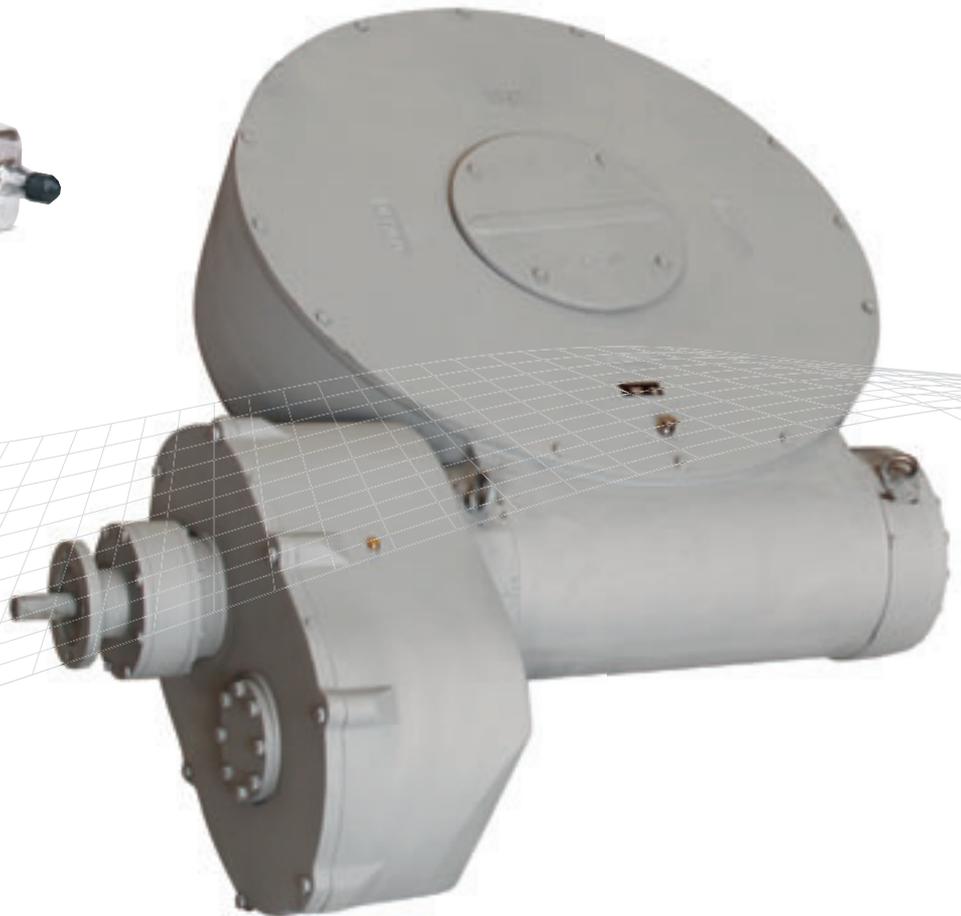
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BVAA News

Best Valve World Yet!



BVAA's Hospitality Suite at Valve World

In late November 2012, BVAA had without doubt its most successful Valve World Expo yet. We took the unprecedented step of taking a Group Stand, with several members taking booths around the periphery of a hospitality suite. The results were amazing and the stand was rammed with members and their guests all week. There was also a highly successful British Reception for 200 invited guests. A full report is given in our Annual Review section.



The BVAA and VMA co-operated on a joint stand

Aberdeen Clients Visit

As part of our Business Development Partnership with NOF Energy, BVAA members formed a key part of a small group who undertook visits to four major oil and gas clients in the Aberdeen area in mid-December. Hosts included Technip, Amec, BG Group and Aker Solutions. The clients typically gave excellent overviews of their businesses, work programmes, routes to vendor approval and contact information – all extremely valuable. There was also a Networking dinner on the first night.

At the client meetings, 'Valves' quickly became a major talking point, as they are regarded by many as 'pinch points' in their efforts to expedite their projects. Valve (and Actuator) companies who are able to meet technical requirements and deliver promptly would look to have key advantages for this important customer base.



KBR Desktop Exhibition

On 21st November 2012, BVAA held another very successful Desktop Exhibition event at KBR, Leatherhead. Fifteen BVAA members exhibited, receiving over 50 guests from the company's various departments. These events remain popular with valve users, as it allows them to see a good number of potential suppliers, with strong technical knowledge, all in the space of a couple of hours, right on their doorstep. If you would like to host a desktop, contact rob@bvaa.org.uk



KBR 'desktop' exhibition

BVAA AGM Success



As well as being an opportunity to officially endorse and organise the Association's past, present and future business, the BVAA AGM meeting cluster also gives members an opportunity to network, hear reports from the various activity strands and working groups, and to meet with partners in a convivial atmosphere. This year's event was no exception!



Alan Beaulieu's riveting presentation

After a nervy start with an eye on the weather for snow, all events went off very successfully indeed. The BVAA Board held their meeting on Thursday 6th December 2012 at Slaley Hall near Hexham, Northumberland, and then represented the Association at the NOF Energy Annual Dinner nearby.

without hesitation, repetition and without any notes, resulting in some of the best feedback we've ever received regarding a BVAA speaker/topic. Members will be pleased to learn we hope to have Alan speak again at the Spring Conference.

On the 7th, members were treated to an excellent presentation by Alan Beaulieu of the world renowned Institute for Trend Research, entitled 'The Economic Outlook & Beyond.' Entertaining, witty and insightful, Alan presented for two hours

After the usual Association update reports and AGM, over 100 members and partners were able to relax with a champagne reception, a superb dinner and outstanding cabaret with 'Beyond the Barricades' ending their set with a rather topical rendition of the signature songs from Les Misérables. As former members of the show's London cast, the performance was of course sensational!



Beyond the Barricades at the BVAA AGM

Our generous AGM Sponsors



GE Energy



Knowledge is potential power

The untapped power within our young people must be addressed. Speak to almost any employer and they will voice their frustrations that our educational system is not delivering new entrants into employment that have "what it takes".

What do employers want more than anything else from an employee? Attitude.... Attitude.... Attitude. Do we currently teach this at school, college or university? As Mrs Thatcher would say No.... No... No!

So here is my solution:

All teachers/lecturers/tutors should spend three days per year going into the workplace which would mean six different working environments in their year. This alone would manifestly help them to have the right attitude of what employers are looking for and would in turn have an impact on their own teachings. Not difficult to organise and treated a bit like jury service.

Secondly we teach life skills for all school leavers. Yes I have a vested interest as we have the tried and tested programme that has achieved amazing results.

Thirdly anyone in employment should be encouraged and rewarded with recognition to spend a couple of days a year with school leavers.

Finally 2013 is going to be the year of the customer. Some companies will be taking market share from their competitors. If your customers are satisfied with your product or service, hear it loud and clear from me – you are in trouble!

Do come to our BVAA Business Growth Workshop on 16th April and pick up some great pointers for not only keeping your customers, but nicking some new ones from your competitors. Contact karen@bvaa.org.uk for details.



Richard Denny

Business Growth Workshop

A One Day Workshop by The Richard Denny Group in Association with BVAA

Led by Bob Wilson

Objective

Increase sales revenue, either by winning new customers or increasing the average transaction value while at the same time building long term relationships and getting repeat orders, and the latest skills and best practice for 2013. Each participant will leave with an in-depth understanding of the sale structure from appointment making to closing the sale. Built into the programme will be the unique Denny ingredient for achieving greater success.

The workshop content includes:

- Getting yourself accepted by the customer immediately
- Opening the meeting and agreeing goals
- Understanding the customer's requirements
- Active listening skills
- Checking your understanding
- Matching their needs with your solution
- Selling the benefits of your solution
- Asking for their business
- Closing the sale effectively

Who should attend?

This course is suitable for anyone who has the responsibility of business growth, either to new or existing accounts, engineers, sales people, account managers, business development executives and is also a useful refresher for seasoned sales personnel.

The results

Increased profitable business.

Date & Venue

16th April 2013, BVAA HQ.

Each delegate will receive a course manual, a Richard Denny book personalised and signed by Richard Denny.

To enrol email: karen@bvaa.org.uk
or Tel: +44 (0) 1295 221270

Fees

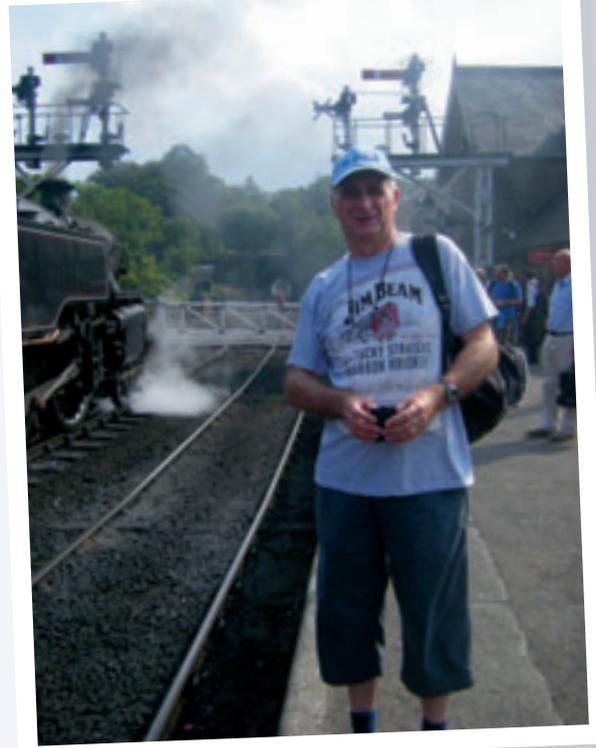
£395+vat for BVAA Members, £450+vat non-members.

Mad Hatters

'How far can you go wearing a BVAA Hat?'

BVAA hats continue to travel the world! This time however only to the north of England. Regular 'Hatter' and train fan Graham Lomax is photographed... well where? If you can identify the railway line BVAA will donate £50 to the charity of your choice. If you get the station and not just the line, there may even be a bonus! First correct answer to rob@bvaa.org.uk wins.

BVAA Hats, or Brollies, are available free in exchange for a photo of you using them somewhere interesting. Contact the BVAA.



Above: A 'be-hatted' Graham Lomax



Our congratulations to Tony Smith of Sizewell B power station who correctly identified that Rob Bartlett was photographed last time 'escaping' from Alcatraz island, and prison, San Francisco. £50 is on its way to Home-Start Suffolk Coastal.

More New Members!

BVAA Membership continues to grow. Our latest recruits include....



Phil Clifton (left) and Jeff Vile of Signum Group, incorporating Gall Thomson and KLAW Products Ltd, with their BVAA Member plaque.



Harry Pomp and Dominic Clarke, Duxvalves.



Keith Masterman of William Eagles.



Managing Commercial Risk

“Delegate feedback was exceptionally good”

Commercial Risks are inherent in both day-to-day-business and formal contracts, and managing these risks effectively will reduce liabilities, and improve margins. For a quick assessment of the risk exposure in your business, check out the 12 questions below.

Launched in 2011, BVAA's Managing Commercial Risk training course was oversubscribed in July 2012, and delegate feedback was exceptionally good. Sixteen delegates each marked against five criteria and the average score was an exceptional 8.6 out of 10! Highest scores were given to the practical 'toolkit' of material delegates take away for future use back in their own business.



Course material has been prepared from real customer experiences worldwide over many years, with additional inputs from third party commercial and intellectual property lawyers and liability insurance specialists. The training is a mix of presentation, case studies and group participation and designed to raise awareness of key commercial risks and how to address them in practical terms.

If you, or any of your colleagues, would like to join the next session, please complete the BVAA Training booking form or email Karen@bvaa.org.uk.

Please be aware that this course is very popular and fills up quickly; places are limited.

COMMERCIAL RISKS: IS YOUR BUSINESS EXPOSED?

Improve margins, reduce liabilities and minimise future risks

1. What terms and conditions of sale apply to your major projects and contracts, and to your day-to-day business? Where necessary have the terms been reviewed and approved by senior management?
2. Is the business working within the relevant corporate and legal guidelines, e.g. in respect of competition law, export compliance and the new July 2011 Bribery Act?
3. Is your confidential information and intellectual property adequately protected?
4. Are commercial risks in your major projects and contracts being fully assessed before order acceptance and contract signatures?
5. Are you suffering drawn-out warranty or contract performance disputes?
Are your product specs for oem's, and kpi's for MRO clearly enough defined?
6. Are your margins being eroded by fluctuations in volumes, exchange rates, material costs or supplier prices?
7. Are your customers pushing you to engage in formal contracts with them?
8. Are you getting the most out of spare parts pricing?
9. Are your liabilities defined and capped? Are they in synch with your liability insurance policies? What steps can you take to limit/reduce your liability exposure?
10. Are you exposed to costs/risks if a project or contract is terminated? Are you locked into contracts/projects which are no longer attractive financially?
11. Are you exposed to product development costs without guaranteed payback through product volumes?
12. In negotiations, are your teams focussed on key drivers/issues for your business, as well as the customers? Are they getting the best out of the negotiations?



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EXPO
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Emerson Extends The Fieldvue™ Digital Valve Controller Line

Emerson has extended the Fisher® FIELDVUE™ digital valve controller family with the addition of the FIELDVUE DVC6200p PROFIBUS PA digital positioner.

The Fisher FIELDVUE DVC6200p digital valve controller is built on Fisher's highly successful and innovative linkage-less, non-contact sensor technology. PROFIBUS users can now experience the performance and reliability demanded in today's process control environment.

For throttling control applications, the FIELDVUE DVC6200p offers an Analogue Output function block, while a Digital Output function block is available for on/off applications. Utilising the best of PROFIBUS PA, the DVC6200p provides a wealth of alerts, trends, and diagnostics to allow for process visibility and control not previously available in a PROFIBUS PA digital valve controller.

A quick set-up and calibration, including performance tuning, can be performed locally in a matter of minutes. For more extensive parameterisation, leading PROFIBUS configuration tools such as Siemens PDM can be used. The DVC6200p supports enhanced device description (EDD) files that allow for quick and easy configuration.



Emerson's Fisher FIELDVUE DVC6200p is now available with the PROFIBUS PA communication protocol

The FIELDVUE DVC6200p digital valve controller is certified to Profile 3.02 for PROFIBUS PA devices by the PROFIBUS Nutzerorganisation a.V (PNO).

CSA, IEC Ex, and FM approvals are available now for the DVC6200p. Emerson's growing portfolio of PROFIBUS-supported interoperable products includes the DeltaV™ digital automation system, AMS Suite asset management software, Fisher® control valves, Rosemount® flow, pressure, and temperature transmitters, Rosemount Analytical transmitters, and Micro Motion® Coriolis mass flowmeters.

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ASCO Numatics introduces stainless steel pulse valve for dust collector systems

ATEX certified series 353 pulse valve is ideally suited to challenging environments in the agricultural, grain, food, pharmaceutical, chemical, wood, plastics and cement industries

ASCO Numatics has introduced a 316L stainless steel version of its series 353 pulse valve for use in dust collector systems. Certified to ATEX Category II 2G/D Zone 1 + 2 for explosive areas, it has been introduced to meet the growing demand for valves for challenging environments in the agricultural, grain, food, pharmaceutical, chemical, wood, plastics and cement industries.

The valve has the same features as the existing aluminium version and is suitable for control with either remote ASCO pilot valves or an integral solenoid. The diaphragm pulse valve combines high flow, long life and extremely fast opening and closing to provide a reliable and cost effective solution. The valves are available as 3/4", 1" and 1 1/2" threaded versions and can be mounted in any position without affecting their operation.

The series 353 pulse valve is part of a complete range of dust collector products from ASCO Numatics that includes power pulse valves, pilot valves, pilot boxes, sequential controllers, pressure differential modules, tank systems and air preparation equipment.



ASCO Numatics series 353 pulse valve is ATEX certified and ideally suited to challenging environments

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www.asconumatics.co.uk

**BVAA**



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SILs One Day Course

“Clearly conveyed, providing useful information on an often misunderstood subject.”

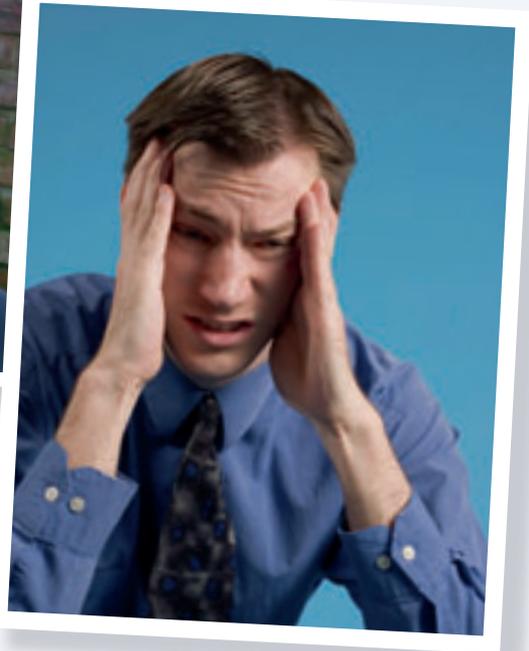
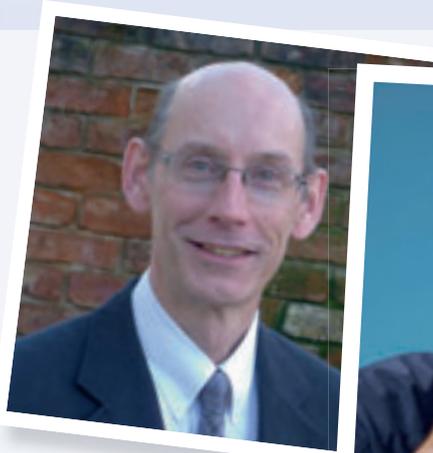
A previous delegate's feedback

The BVAA one-day SILs course takes the attendee from the basis of IEC61508, through SIL determination (where do SILs come from and how are they established?) to SIL Assessment including FMEA (failure modes and effect analysis) application to identify failure modes, sources of failure rate and enable the calculation of PFD (Probability of Failure on Demand) and hence SIL.

What constitutes a viable SIL claim? Probability of Failure on Demand (PFD), Architectural Constraints (HFT and SFF), Control of Systematic failures (Techniques and Measures) and software (if relevant).

The course is focused on what the standard means with respect to the valve industry and so all examples are related to valves and actuators.

To book, use the Training Form in this issue or contact karen@bvaa.org.uk



Left: Paul Reeve BVAA's new SILs lecturer
Right: SILs can be quite a headache!



By BVAA's Technical Consultant,
Peter Churm

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Hot Spot Revisions to FprEN 13547 and FprEN 1983

FprEN 13547 “Industrial valves - Copper alloy ball valves”

FprEN 1983 “Industrial valves - Steel ball valves”

Following revisions to both Preliminary Standards approval assessments have been positive, therefore FprEN 13547 will be submitted to Unique Acceptance Procedure (UAP) by mid-February 2013 and FprEN 1983 will be submitted to UAP by the end of January 2013.

In both standards the need for making reference to a document other than those developed by

CEN, CENELEC, ETSI, ISO and IEC has been fully justified.

Therefore approval has been given for the normative reference: to ASME B1.20.1 “Pipe threads, general purpose (inch)” and ASME B16.34 “Valves Flanged Threaded and Welding End” to be included in FprEN 13547 “Industrial valves - Copper alloy ball valves” and in FprEN 1983 “Industrial valves - Steel ball valves”



BVAA welcomes users' views and articles.
Submissions to rob@bvaa.org.uk

Crane Fluid Systems New DPCV Range Reduces Energy Consumption



Crane Fluid Systems' new DPCV and companion valve are quick and easy to install

Leading valve manufacturer Crane Fluid Systems has launched a new range of modern and compact differential pressure control valves (DPCVs) with unique features that give cost-saving benefits, reduced energy consumption and a simplified installation process, whilst still maintaining their high quality and reliability.

Belonging to the FlowMaster range of commissioning valves, the DPCVs (F400 & R400) are quick and easy to install, have a long life expectancy and require little or no maintenance. Available in sizes DN15 to DN50, they are PN16 rated and have an adjustable differential pressure range of 20 – 100kPa.

With cost cutting on every business's agenda, the new DPCV range has been specifically designed with two great new features which do exactly that. Importantly, they also aid system analysis and simplify circuits too.

- The first, having threaded female ends, reduces the need for additional adapters in most circuits and allows easy connections to alternative pipework solutions when adapters are required
- The second, the addition of two bosses, is for integral test point installation, which gives greater flexibility and reduces the need for separate test points within the circuit.

With the addition of these two bosses, pressure readings can now be taken from before and after the control circuit. The pressure is linked to the upper and lower chambers and the diaphragm, which separates the chambers and pressures, controls the rubber-seated piston to stabilise the pressure differential. The piston closes the valve on rising differential pressure and opens it on falling differential pressure. The valve will

continue to move in this way until equilibrium of pressure is achieved.

Adding a DPCV to a system has numerous benefits – as well as controlling differential pressure and flow rate, they also help to reduce pump energy consumption when using a variable volume system. In fact, BSRIA figures suggest that DPCVs could reduce the energy consumption of a typical heating system by 60-70%. They even lower the risk of noise whilst still maintaining consistent circuit performance.

A further benefit of using DPCVs is simplification of the balancing and commissioning procedure – allowing commissioning to be carried out in sections rather than on the entire system at one time. By pairing the new DPCV with a DPF1732 companion valve, a fixed orifice double regulating valve, the DPCV can be adjusted to set and maintain flow rate. Flow rate variations in other areas of the system will subsequently have no impact on flow rate to the sub-circuit. An impulse tube, which is supplied with the DPCV, plays an essential role here in allowing the DPCV to open and close depending on system conditions, by linking and transporting pressure between the flow and return pipework.

CRANE BUILDING SERVICES & UTILITIES

Crane Fluid Systems

Tel: 01473 277 300

www.cranefs.com

ABB extends high pressure range with 1000 & 600 bar transmitters

ABB has launched 1000 bar gauge (266HSH) and 600 bar differential (266DSH) pressure transmitters, as additions to its widely used 266 range of transmitters.

Designed to meet growing demand from the oil and gas industry and power markets, which frequently require pressure transmitters with higher working pressures, the high pressure transmitters are suitable for applications such as high pressure injection and other similar applications around the wellhead, such as high pressure gas compression systems.

The 266HSH is a high overload gauge pressure transmitter with an upper range limit of 1050 bar, and offers a base accuracy of 0.15% of calibrated span, outperforming other competing transmitters.

The 266MST is a differential pressure transmitter for flow and pressure applications with working pressures up to 600 bar.

Both transmitters offer a choice of signalling protocols, being available in 4 to 20mA HART, Foundation Fieldbus and Profibus versions. This makes the transmitters suitable for a wide range of applications, from oil and gas, which primarily use 4 to 20mA HART, to the water industry, which commonly employs Profibus.

Both transmitters are available with a wide range of hazardous area certifications and also have TUV IEC61508 SIL2 and SIL 3 certification for safety applications. The 266HSH pressure transmitter uses a solid metal diaphragm, requiring no gaskets or fill fluid.

Made from Inconel 718 (NACE), it offers excellent resistance against high acidity and alkalinity, chloride-ion stress corrosion cracking and attack by oxidising media and sulphur compounds. The inclusion of Molybdenum also allows the alloy to resist pitting. Initially developed for the aerospace industry, Inconel 718 is increasingly used in oil field applications due to its high strength and corrosion resistance.

The new high pressure transmitters can be configured using ABB's new DHH805 hand terminal. Compatible with any HART enabled device, the DHH805 is certified for use in hazardous areas. Unlike other devices on the market, the DHH805 requires no additional



licence to download device descriptions. With over 80 hours battery life for continuous use, the DHH805 provides a useful tool for gaining access to intelligent information from HART devices plant wide.

The ABB logo consists of the letters 'A', 'B', and 'B' in a bold, red, sans-serif font. The 'A' is slightly larger and positioned to the left of the two 'B's.

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We have been assured that no tree frogs were harmed during the production of this photograph. Fred (the frog) was rewarded with a good meal for his time.

International recognition for CVS

Control Valve Solutions (CVS) Ltd has proven its commitment to environmental responsibilities and accountability by certifying to the internationally recognised ISO14001 standard.

Back in 2009 when CVS started to think about certification an independent consultant was employed. In the spring of the following year ISO9001 was achieved and then in June 2011 the ISO14001 process started, gaining accreditation in September 2012.

At the end of October the certificate was officially handed over by Rob Wilkes and Pacifique Kimonyo representing ISOQAR. Mick Beavers, CVS' Managing Director, accepted the certificate in the presence of Craig Donoghue from One Stop Waste, CVS' waste solutions partner.

After the formal ISO14001 presentation Rob and Pacifique had a tour of the facility. Both



Rob Wilkes and Pacifique Kimonyo, Alcumus Group presenting CVS' ISO14001 certificate to Mick Beavers, Managing Director, Control Valve Solutions with Craig Donoghue, One Stop Waste, CVS' waste solutions partner.

commented on the fact that the certification process usually takes a minimum of 18 months but CVS had achieved ISO14001 in a record breaking time and at the same time moved into a much larger and impressive facility.

The occasion was also marked by ISOQAR, part of the Alcumus Group producing a case study on CVS' journey towards ISO14001.

John Beavers, Safety, Health & Environmental Manager said: "We wanted to make our business a more environmentally friendly, cleaner and safer place to work. The main benefit was to see the company operating in a fully professional and transparent manner, with our employees knowing they work for a company who care about their safety and welfare, and truly care about the environment."

"The very nature of our business is to deliver valves and associated equipment within very tight deadlines, and we wanted to embrace a system that did not compromise our level of service

but did demonstrate our duty of care."

Nikki Samme, Group Head of Marketing for Alcumus, commented "One of the many benefits of ISO14001 certification is the management and reduction of costs through control of waste. A key factor in CVS' commitment is to uphold its core value proposition: to supply services to the highest standard of quality whilst keeping costs low.

By implementing ISO14001, CVS has a framework that allows it to consistently control its impact on the environment, ensure compliance with environmental legislation and continually improve its business operations, as well as show its commitment to corporate responsibility."

The next phase of ISO18001 has already been planned as the CVS team drive forward with industry standards. For more information please contact Vicky Greenhalgh, Marketing Manager, Control Valve Solutions. Email: vicky@controlvalvesolutions.co.uk

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EnerMech Invests In Second Norwegian Base

Mechanical engineering company, EnerMech, is to open a second Norwegian base as part of a £3 million (NOK 27.7 million) investment to grow its Scandinavian business.

The new base and workshop in Bergen was selected to be closer to Norway's largest shipyards and to offer a rapid response service to existing and new clients.

EnerMech will target the Process, Pipeline & Umbilicals (PPU), hydraulics, cranes and rental equipment markets and will be able to offer clients a more reactive service for on-site mechanical provision and general customer support.

The expansion will take EnerMech's headcount in Norway to 50, and the company expects the new base to grow in line with its Stavanger operation, which has seen annual growth of between 50-80% over the last four years.

EnerMech general manager in Norway, Trond Møller, said: "After four years of steady growth in Stavanger, opening in Bergen is a natural fit as the city is an important centre for Norway's oil, gas and subsea industries."

"This will give us access to Norway's largest yard market and we are confident there will be a strong demand for our cranes, rental equipment, hydraulics and PPU services. Bergen has always been important to our long-term objectives and this expansion shows we are committed to Norway for the long term and that we will continue to invest in infrastructure to meet client expectations."

EnerMech Ltd was formed in April 2008 and specialises in the supply, maintenance and engineering of cranes, lifting, valves and hydraulic



EnerMech's general manager in Norway, Trond Møller

equipment, equipment rental and the provision of training and specialist personnel to the energy industry. In August 2010 EnerMech invested £4 million to acquire its 16 acre headquarter site in Aberdeen. A further £840,000 is being spent on refurbishments and the construction of new workshops, while another £2 million has been invested in setting up a new Valve Care division which will target the valve supply, testing, inspection and maintenance sector. In December 2010 EnerMech acquired Aberdeen Valve Supplies Ltd and its subsidiaries LG Ball Valves Ltd and Valve Paint Shop Ltd.

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By BVAA's Technical
Consultant,
Peter Churm

Hot Spot FprEN 1591- 4: 2012

FprEN 1591-4: 2012 "Flanges and their joints — Part 4: Qualification of personnel competency in the assembly of the bolted connections of critical service pressurized systems"

This document (FprEN 1591-4:2012) has been prepared by Technical Committee CEN/TC 74 "Flanges and their joints" and is currently submitted to the Formal Vote. It will supersede CEN/TS 1591-4:2007. Changes to the CEN/TS 1591-4: 2007 document can be seen in the comments and observation sheets.

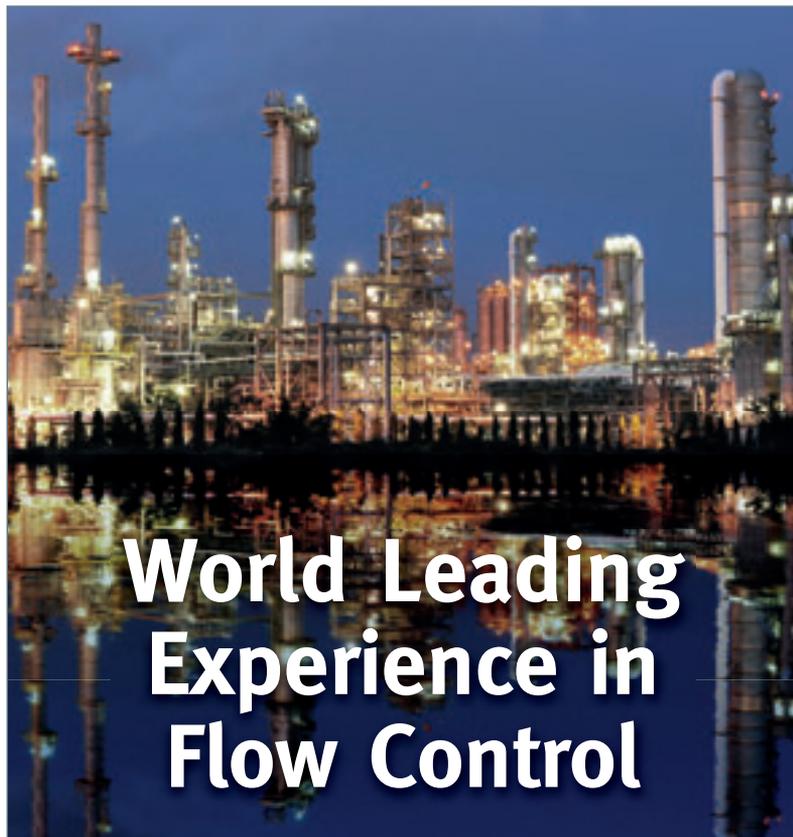
This European Standard is applicable to the bolting technicians, and their supervisors, the responsible engineers, who disassemble, assemble and tighten the bolted connections of whatever shape of critical service pressurised systems where the failure of a connection would endanger personnel, plant or the environment.

A route for achieving competency in the skills required to safely and successfully disassemble, assemble and tighten pressurised bolted joints of any shape to a design bolt load using documented work instructions, thereby establishing a joint capable of maintaining a leak-free status throughout its' service life, is given in the document.

This European Standard provides a modular training syllabus and an assessment process that can be used to determine the competency of personnel who disassemble, assemble and tighten bolted connections, whatever their shape, fitted to pressurised equipment containing a medium at any combination of temperature and pressure.



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Redefining Flow Control

Working in the energy industry?

Talk to



Joanne Leng MBE, Director Business Development. NOF Energy

Last year BVAA formed a Business Development Partnership with NOF Energy. Joanne Leng MBE gives an overview of the organisation's services and how to make best use of them...

NOF Energy, the business development organisation for oil, gas, nuclear and offshore renewables sectors has been working closely with its 400 plus strong membership base to support their growth and diversification across the energy sector. Not only do they provide access to networking opportunities through an astonishing number of industry specific events, provide useful industry intelligence, make introductions to new contacts and offer marketing and media support they also support their members with their international business development activities through overseas market visits.

The NOF Energy contacts network spans the energy sectors, for us that is primarily oil and gas but also incorporating some nuclear and offshore renewables and since 2011 incorporates a new category of membership called Strategic Partners. They are the major clients across the three energy sectors NOF Energy is involved in and each has a tailored supply chain engagement programme. This means NOF Energy has a "Supply Chain Champion" within each who will actively engage with members, take calls and use the network to source products and services. Some of the Strategic Partners include Taqa, Aker Solutions, Petrobras, Worley Parsons, Technip and Wood Group PSN.

Networking – just how easy is it really?

Networking and building relationships is key to business success, people buy from people and the type of rapport you develop with others is critical for your business growth. How exactly do you make that first vital good impression, when do you move from small talk to business talk and how do you secure a meeting from an initial discussion at a busy event? How many times have you tried to reach that all important person at an event but could never find the right moment to interrupt, and we have all been stuck with someone

and found it difficult to break away to go meet others. NOF Energy leads in its field when it comes to the art of networking, through a comprehensive events programme with some unique networking tools to make those all-important industry connections so much easier. It's never an easy task to enter a room and start to "network", it takes practice and technique and usually a helping hand which is where we come in, our introduction service sees the NOF Energy team facilitating the exact introductions you came along for; but you will have to come along to one of our events to see just how well it works!

Events – not just good for a bite to eat and general chit chat

NOF Energy organise a multitude of events each year. From small focussed one to one meetings with UKTI representatives and specialist consultants to the large conferences and networking dinners.

Networking lunches with clients are certainly one of the most popular. One client presents on projects and procurement requirements, companies come along not only to hear the presentation but also to network. Exhibition stands circle the room so those who really want to showcase their wares can do so but our all-important introduction service is also available on the day. So when you receive your final delegate list two days prior you can start to plot your target contacts and come armed with requests for introductions. BVAA, as part of the new service, has a stand to promote their membership base and they are on hand to make sure their members present get maximum benefit from attendance. A dedicated BVAA literature point is also available so members can display brochures, business cards and newsletters.

The annual NOF Energy Flagship event is the National Conference and Exhibition. Energy: A Balanced Future,

Decades of Opportunities. This takes place on 14th March 2013 at the Hilton, Gateshead with a pre-conference reception on 13th March. Lots of networking goes on, an exhibition area is there to browse and great for finding out what's happening across oil and gas, nuclear and offshore renewables.

Business outside of the UK – It's not as scary as you think

Exporting isn't just for the brave, it's also for those with vision and foresight to grow their business even further. We all see organised visits to Nigeria, Libya and Kazakhstan taking place and maybe this isn't for you but how about Norway, France, Italy, Netherlands and Spain. NOF Energy has led visits to these markets and found members win business relatively easily once relationships have been formed. Don't worry about the functional side of how do we export, freight, taxation, export finance etc, practical help is on hand from UKTI, Chamber of Commerce, banks and lawyers who are all members of NOF Energy, it just takes a call to put you in touch with them.

Exhibitions – costly, hard to justify the impact but sublimely effective at marketing your company

Emails hit our desktops every day from organisations selling exhibition space. It's hard to decide which ones to do, justifying the cost and then allocating resource to organise them and man the stand.

NOF Energy has been involved in key exhibitions for many years so we know which ones are worthwhile (in our opinion of course). A stand share is offered whereby we take a large area, divide it into individual areas, have a central registration desk and meeting room all sharers can use, plus, and this is a big plus, our team can man your area if you want to go off and work the exhibition. All this makes for a cost effective option to have a presence at a show.

Industry intelligence – knowledge is power

NOF Energy circulate to members each week a summary of what's happening in the industry, from new projects, contract awards, specific sales leads and industry initiatives. We make it short and snappy so you don't need to plough through loads of emails of information providers and search the web for what's going on. The best bit being, when you find a project you think may be of interest then you call us and we give you a contact to then go pursue the business.

Marketing support – it's about making the market aware you exist not just giving out pens

Most companies are technically fabulous at what they do, but are they as capable when it comes to telling the world about this great product or service. NOF Energy can advise on your website, brochures, offer advertising at reduced rates with some of the key industry publications. We can usually pick

Partnership Benefits to BVAA Members include:-

- Access to a dedicated team of business development professionals
- Access to NOF Energy networking lunches at Member rates
- Access to NOF Energy Supplier Day & Conference at Member rates
- Access to NOF Energy's UK, Global & Strategic partners (large client companies such as Amec, Technip, Taqa and Worley Parsons)
- BVAA Members' literature area at networking lunches
- One-to-one introductions to key partners and attendees of your choice
- Joint-branded, valve industry-specific networking lunch(es) such as the recent ones with Taqa Bratani and Score Group
- Joint-branded, valve industry-specific business development overseas visit should there be demand from within the BVAA membership going forward

members up some free editorial and we offer a free press release service, using the time we buy in from a professional (and extremely knowledgeable of the energy industry) PR agency. Go on, shout about what you do, your audience will remain limited if you don't.

Results – that's what we are all looking for

But what about generating actual business for members, does NOF Energy really make a difference and what sets them aside from other, let's say trade associations?

Joanne Leng MBE, Director Business Development for NOF Energy says "Through making sure we regularly connect members to each other, not just through the traditional means of events but through day to day proactive hands on approach of picking up the phone and encouraging members to engage with each other, then we can say we make a real difference. We are out every day building relationships and seeing first-hand what they do and what type of support they specifically need from us at any point in time"

contd...

“... a recent member introduction resulted in £600k worth of business”

“A couple of examples of recent support; a member introduction resulted in £600k worth of business, a company who attended our supplier day this year advised that at last year’s event they picked up over £150k worth of new business, Not forgetting our international visits which tend to generate a lot of good business, an offshore renewables visit to Germany recently saw immediate enquiries coming through, a member who travelled to Brazil with us picked up a contract worth £250k one week after returning and a member who has been on various visits to Spain with us is picking up contracts worth over £2million. As long as we are introducing our members to the right people with the right opportunities then we are doing something right as these examples show.”

The future is bright

NOF Energy is keen to highlight that it plans never to stand still; they have taken on new staff members recently to cope with demand from industry seeking effective yet unique business development support. New initiatives are coming out thick and fast. Their Military Recruitment Fair enabled members to find much needed skilled engineers and technicians, this has resulted in the launch of Military2Energy, a new service offering members 12 months’ worth of recruitment support to pick up armed forces folk leaving the services.

So what’s the challenge for NOF Energy? Joanne says “Keeping one step ahead of the game, making sure we offer a service which is high quality, useful to companies and at the end of the day goes some way to facilitating new business for them.”

The link up with British Valve and Actuator Association (BVAA) sees a new business development partnership beginning to show results. BVAA members have been accessing the NOF Energy events and are now being seen as key networkers. In addition the BVAA name is out there in the client community NOF Energy works with and we envisage lot more activity going forward where BVAA members will reap rewards from the business development and networking support from NOF Energy.

As a not for profit organisation with 24 years’ experience behind it, NOF Energy is certainly now in a privileged position. A stand-alone organisation not reliant on public sector funding, it generates its own income from membership and commercial services but as with any not for profit organisation it plans to re-invest its modest surpluses into new value added services for members. So watch this space.

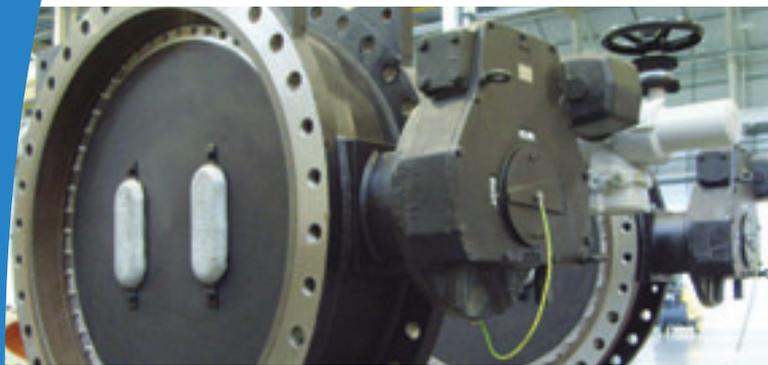


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The logo for eTec features the word 'eTec' in a stylized, blue, sans-serif font. The 'e' is lowercase and the 'T' is uppercase. A blue swoosh underline is positioned beneath the letters.

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By BVAA's Technical
Consultant,
Peter Churm

Hot Spot common approach to proof testing of pressure equipment

A draft technical report on a common approach to proof testing, prCEN/TR 764-8 "Pressure equipment and assemblies – Part 8: Proof test" has been prepared by CEN/TC 54. "Unfired pressure vessels"/WG 55 "Inspection and testing". It is presently registered at preliminary stage.

This European Standard consists of eight parts which are:

Part 1 Terminology – Pressure, temperature, volume and nominal size;

Part 2 Quantities, symbols and units;

Part 3 Definition of parties involved;

Part 4 Establishment of technical delivery conditions for metallic materials;

Part 5 Compliance and Inspection Documentation of Materials;

Part 6 Structure and content of operating instructions;

Part 7 Safety systems for unfired pressure equipment;

Part 8 Proof test

Part 8 addresses the proof test of items of pressure equipment and assemblies. It is intended to establish a common approach to fulfil the essential requirement 3.2.2 of Annex 1 of the pressure equipment directive 97/23/EC, to be used as a basis in the specific product standards. It takes into account the existing guidelines adopted by the European Commission, detailed in Annex A.

Once accepted, the common approach presented in this technical report should be used as a basis in the CEN technical committees dealing with pressure equipment or pressure assemblies, when their standards are revised, or when new standards are developed.

Therefore the draft prCEN/TR 764-8 is now submitted to CEN/TC 69 for comments to be considered by CEN/TC 54/WG 55 during its next meeting in April 2013.

Therefore the National Standardization Bodies having comments have to send them to CEN/TC 69 secretariat by 22 February 2013. Any comments from BVAA members should be forwarded to BVAA for onward submission by 15 February 2013.

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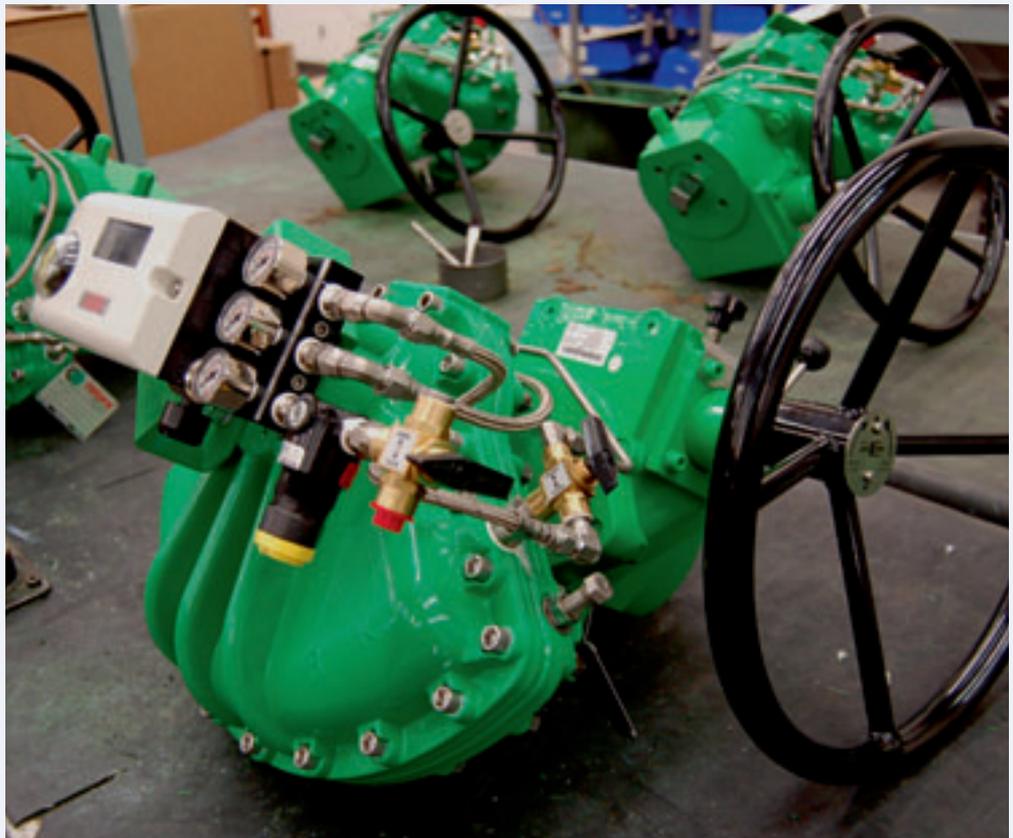
- Switching off without overtorque
- Valve monitoring through torque recording
- Avoidance of water hammer/cavitation
- Precise and repeatable control



Rotork declutch gearboxes deliver swift support for retrofit power plant upgrade

Rotork Gears has supplied specialised declutch manual override gearboxes on swift delivery for a damper drive retrofit upgrade project at a large municipal power plant.

Twelve ILG-D gearboxes were delivered within four weeks by the Rotork Gears Houston facility for attachment to K-Tork Type K pneumatic damper drives installed at an 1850MW coal-fired power plant in New Mexico. The applications mainly involve induced and forced fan combustion control. Installed in four groups of three, the gearbox design has enabled the handwheels to be suitably positioned through 90° quadrants



Actuator packages, consisting of K-Tork actuators, Rotork ILG-D gearboxes and smart positioners, ready for delivery to site

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to accommodate obstructions and for ease of operation.

Rotork ILG-D gearboxes are specifically designed to provide a reliable means of manually overriding double-acting pneumatic valve actuators in power and process applications. Mounted between the actuator and the valve or damper, the gearboxes employ a declutch mechanism to disengage the handwheel drive during pneumatic operation.

The full range of Rotork ILG gearboxes offer a rugged solution for spring-return or double-acting pneumatic actuation applications with output torques up to 32,000Nm (283,520lbf.in) in an ambient temperature range of -20 to +120°C (-4 to +250°F).

Standard environmental enclosure ratings are IP65 and IP68.

Rotork Gears and K-Tork are members of the Rotork group of flow control companies. This contract is an excellent example of how group companies can combine to provide the best technical and commercial solutions for flow control applications.

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AUMA UK's SIPOS and Siemens Service Specialism



AUMA UK, supplier of modular electric actuators, is raising the profile of its service capabilities for valve control devices. Comprehensive support is provided by the UK organisation for all AUMA and SIPOS Aktorik products plus Siemens legacy actuators. The capability includes skills in retrofits and power industry outage support.

Extensive service facilities at the AUMA UK factory include full test equipment, including a £100,000 rig providing sophisticated load and calibration assessments. Actuators can be returned to the facility for repair, recalibration and re-warranty. An extensive spares range ensures prompt shipments and minimises stock holding requirements for end users.

AUMA UK provides service support for its own brand products plus SIPOS Aktorik devices and Siemens legacy actuators.

New Inventory at Cameron Rapid Response Centre

Cameron's European Rapid Response Centre (located at International House, Newmarket, Suffolk, United Kingdom) has new Cameron inventory, immediately available, including WKM® 370 Trunnion Mounted Ball Valves, NEWCO® Carbon Steel and Low-Temp Carbon Steel Gate, Globe and Check Valves and OIC® Stainless Steel API 600 and 603 Design Gate, Globe and Check Valves.

For up-to-the-minute, 24-hour stock availability, please visit our new website at www.valve-stockist.com



Cameron
Tel: 00 44 1638 665000
info.ivl@c-a-m.com

UK Managing Director Paul Hopkins confirmed that the company operates to rigorous Service Level Agreements and performs all processes to ISO 9001-2008 standards. Commenting on AUMA UK's strength in service, Paul said:

"As the only OEM approved actuator repairer for AUMA and SIPOS in the UK, a key differentiator for our organisation is that we oversee all our service functions – there are no third parties licensed to carry out work on our behalf."

The UK team is supported by three dedicated service centres at the company's German manufacturing campus in Muellheim, and an independent Service Centre in Cologne – the extensive facilities confirm the commitment to after-sales from the AUMA group.



Auma Actuators Ltd
Tel: +44 (0) 1275 871141
www.auma.com

How do you keep up with valve industry developments?



We all have difficulty getting out sometimes.

Time is a precious resource after all. But if you're a significant user or buyer of valves and actuators, you really do need to keep up with new technology and product developments, and keep an eye out for new suppliers.

BVAA has the Answer! **We bring the exhibition to you!**

For many years the BVAA has been organising 'desktop exhibitions' for major users, inside their own premises.

These zero cost, hassle-free events are managed by BVAA and are customised to suit your needs at your convenience.

Solve your supply chain issues over lunch

Designed for rapid set-up and breakdown, 'desktops' typically fit around your lunch period, to minimise downtime. We demonstrate the latest products, provide unrivalled industry advice, and have over 170 leading UK companies to choose from.



"We have had very positive feedback from exhibition attendees. We are already looking forward to doing it all over again"

- Dave Anderson, Score.

Previous hosts include:-
Ministry of Defence, Foster Wheeler, AMEC, MW Kellogg, Stone & Webster, Snamprogetti, British Energy, Score, Aker Kvaerner, KBR, Parsons...



British Valve & Actuator Association
9 Manor Park, Banbury, Oxfordshire OX16 3TB
Tel: 01295 221270 Fax: 01295 268965
Email enquiry@bvaa.org.uk
www.bvaa.org.uk/exhibitions.asp

Sophisticated SIPOS actuation supports Moscow heating scheme

With temperatures dropping as low as -40°C , thousands of multi-flat dwellings in Moscow need heating for a large part of the year. A modernisation programme incorporating SIPOS Aktorik's electric actuators is updating a district system to ensure that effective year round heating is provided to the Russian capital's residents.

Over thirty SIPOS actuators provide valve control technology for large pipelines up to 1000 mm in diameter which require fast closure to avoid water leakage, which would be catastrophic for Moscow city as, due to the climate, the water would rapidly turn to ice in winter. A proportion of the actuators are adopted for emergency closing and a number are used for precise flow control (modulating duty).

Key features significant in the adoption of SIPOS' actuators for the district heating application were variable speed performance for precision modulation, soft start and stop capability and prevention of water hammer. As SIPOS 5 actuators have no start-up current, low-cost UPS systems can be utilised for power independency.

A redundant PROFIBUS interface enables integration of SIPOS' actuators into the Moscow system's modern Distributed Control System (DCS).



SIPOS electric actuators installed as part of a Moscow district heating modernisation programme.

SIPOS' local partner visited pumping stations to understand the challenges faced by the customer, the Moscow District Heating Company (MTK). Presentations were made and tests were carried out on the DCS. SIPOS' service extended to engineer site visits to ensure satisfactory commissioning of the actuation technology.

SIPOS Aktorik – the manufacturer and global supplier of specialist and standard electric actuators.

SIPOS Aktorik
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Smith Flow Control (SFC) has introduced its ISO-pattern IML intermediate lock with universal mounting. The IML lock uses an operating key to lock the actuator in an open or closed position so that the valve cannot turn - no matter what. No custom brackets are required; any valve or actuator with ISO standard mountings is compatible with the IML lock. In normal operations, actuated valves respond to process commands in a pre-determined way. But during maintenance, the command architecture may need to be stopped. Ensuring that the valves are set in their failsafe position enables work to be done safely. The IML intermediate lock is available as a key-operated system from the control room or as a standalone lock-out system. Lock Boxes are available with base tags that match up to each lock-out key for ease of identification.

The IML lock is made of sturdy 316 stainless steel built for harsh environments. All ISO 5211 patterns –F05, F07, F10, F12, F14, and F16 – are covered by the IML's six models.



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The full list of courses covers the latest legislation and aspects of the design, operation and maintenance of steam systems. This includes the popular Boiler Operation Accreditation Scheme, or BOAS (D8), and BOAS Refresher (D6AR) course, recommended as best practice by the 'Guidance on Safe Operation of Boilers' or BG01.

Also included for 2013 is the Carbon & Energy Reduction (E1) course. Participants will learn how to identify and evaluate energy savings in steam systems, as well as discovering how to link these savings to emissions and exploring finance schemes to reduce the tax burden.

Spirax Sarco's Water Treatment (W1) course, provides delegates with a holistic guide to water treatment operations, providing schemes to prevent scale, corrosion and fouling.

Customer training can take place on-site or at Spirax Sarco's recently refurbished UK Steam Technology

Centre in Cheltenham. After undergoing a £1.4 million investment, the state-of-the-art learning facility is the only centre in the UK to offer a fully-operational steam system with SCADA control. The advanced facilities allow staff to be trained to a high standard on steam management, making them more aware of the energy saving and environmental aspects of steam plant, as well as safety issues.

Training courses are fully approved by governing bodies BTEC, City & Guilds, Combustion Engineering Association and CIBSE.

Contact Spirax Sarco's Training Co-ordinator Claire Stone, on 01242 535211, or email training@uk.spiraxsarco.com. For a free copy of the 2013 Training Brochure, or to fill in a course registration form visit www.spiraxsarco.com/uk/training

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CVS smash £5m turnover in Q2 of Year 4



Control Valve Solutions (CVS) Ltd's turnover has just exceeded £5million in the second quarter of year four. This has been made possible by the recent move to a much larger facility in Portlethen and staff numbers have increased from 14 to 22 since July.

Mick Beavers, CVS' Managing Director said *"Employee numbers were always going to increase but we had originally planned for an increase to around 30 within the next three years. However with 22 members of staff already employed this is now expected to be much higher."*

All departments at CVS have been expanding including Sales, Workshop & Engineering and Projects as well as front of house. All visitors will now be greeted by new Company Administrator, Helen Brown, who will be even busier when a series of Lunch & Learn events are launched to encourage more clients to visit and tour the new 2,500 square metre facility.

In the Sales Department Roy Hindle, Senior Sales Engineer and Kerry Miller, Sales Administrator now support Sales Manager, Mac Stevenson. Roy's 31 years' experience working with Kent Introl and more recently Severn Glocon will be a great asset to CVS. In addition to this Ryan Macardo

joined the company on the 1st January as Business Development Engineer. Ryan is focusing on external sales and specifically for Aberdeen.

The Workshop & Engineering Department has been strengthened with the recruitment of several Valve & Support Engineers and Aaron Gale is Workshop Supervisor. Aaron has offshore maintenance experience but also uses his people skills, developed through a degree in sociology from Aberdeen University, to head up the Workshop Team.

Within the Projects Team, Carl Enston, Project Engineer and Lauren Smith, Documentation Controller provide valuable support across the company. For Carl Enston, he sums up what

all CVS' new staff have been impressed with when joining CVS, saying: *"I was attracted to CVS as I felt it was a great opportunity to join a company which was at an interesting and exciting time in its history, particularly as the company is in a high growth phase. I was inspired by CVS' in-house software system CVS Manager and could see that the development potential is huge. I also shared Mick's passion for valves, having spent the past 12 years of my working life with a valve company and I felt it was the perfect environment for me to learn more and develop my skills."*

For more information please contact Vicky Greenhalgh, Marketing Manager, Control Valve Solutions. Email: vicky@controlvalvesolutions.co.uk

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High performance DuPont™ Kalrez® O-ring seals available from Dichtomatik Ltd, for use with aggressive chemicals in a wide range of industrial applications covering the measurement and flow control of gases and liquids.

Digital Mass Flow Controllers (MFC's), as typically used in the semiconductor, chemical processing, food and pharmaceutical industries, are designed to both measure and control the flow of various gases and liquids. Applications also occur where MFC's are used in analytical laboratories for High Pressure Liquid Chromatography. In many applications the gases and fluids are operating at modest temperatures up to 80°C, but can include aggressive media flows which necessitate the use of specialised chemical-resistant elastomer seals.

Most gas flow meters are equipped with seals made of DuPont™ Viton® fluoroelastomer. However MFC's need O-ring seals and other custom parts that do not swell in the presence of more aggressive chemicals utilised within their wide range of industrial applications. The sealing specialist Dichtomatik Ltd, is an authorised distributor for the DuPont™ Kalrez® range of sealing products, designed to give extended performance when operating with the widest range of chemicals, even incorporating elevated

temperature conditions. Tests undertaken with an MFC, fitted with DuPont™ Kalrez® Spectrum™ 6375 O-rings and custom parts, increased reliability of operation and the overall Meantime Between Failures (MTBF) of the equipment.

This increased reliability ensured a competitive advantage for the MFC manufacturer and a commercial advantage for the equipment user, as it reduced production down-times. A logistics saving was also achieved as the standardisation on Kalrez® parts for all the site modules led to a reduction in the worldwide inventory of different elastomer seals types for the company. A typical selection of specialised Kalrez® Spectrum™ seals and their particular qualities are detailed, offering minimal swell in various liquids, together with extended lifetime and performance characteristics:

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Ref 7075 - for highest service temperature (up to 327°C) and lowest compression set

Ref 7090 - for high hardness/higher module properties

Ref 3018 - general use in the chemical process and oil exploration industries

Ref 8085 - excellent mechanical strength, very low particle generation and longer seal life

Ref 9100 - for PECVD and HDPCVD processes, offering thermal stability, low erosion, good mechanical strength and excellent elastic recovery

Ref 6230 - superior chemical resistance and low contamination from extractables where FDA compliance is required

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Duxvalves opens Aberdeen office and welcomes Bruce Logan



Harry Pomp, MD Duxvalves B.V. and Dominic Clarke, Duxvalves UK

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Duxvalves, leading original equipment manufacturer of severe application production choke and control valves, has appointed Bruce Logan to join the team in delivering a world class service to the UK oil and gas industry.

Duxvalves recently opened an office in Aberdeen. Mr Harry Pomp, Managing Director of Duxvalves B.V. said,

"The success of Duxvalves has led to its organic growth and as an energetic organisation, we are continuously striving for improvement. Aberdeen is a strategic location that will enable us to diversify our operations and effectively service the oil and energy sector within the UK."

Bruce brings a wealth of experience in the oil and gas industry spanning almost three decades. He has an in-depth understanding of the global oil and gas industry, particularly in the areas of construction, valve engineering, repair, servicing, sales, after market care and spares rationalisation strategy management.

His extensive strategic and practical experience in the industry will be invaluable to the business; covering senior sales, business development, project and technical management.



Bruce Logan

Duxvalves Director for UK operations, Philip Burley, said, "We are delighted to have Bruce on board. His integrity, knowledge and expertise within the industry will contribute greatly to raising the standard of service and opportunities we provide for the oil and gas industry here in the UK."

Utilising global information development Bruce will be focusing on the UK market based in the Aberdeen office located in Queens Gardens.

To find out more information, please visit Duxvalves at www.duxvalves.co.uk

Duxvalves

Tel: 44 (0)116 277 0077
www.duxvalves.co.uk



By BVAA's Technical Consultant,
 Peter Churm



Hot Spot EN 1626 Cryogenic Vessels – Valves for cryogenic service

The 2013 systematic review has been launched on the following European standard of CEN/TC 268 "Cryogenic vessels":

EN 1626:2008 "Cryogenic vessels - Valves for cryogenic service"

It's scope specifies the requirements for the design, manufacture and testing of valves for cryogenic service, i.e. for operation with cryogenic fluids below - 10 °C as well as at ambient conditions to allow for start-up and run-down. It specifies additional requirements for cryogenic service for the appropriate valve product standard. It applies to sizes up to DN 150 including vacuum jacketed cryogenic valves.

This European Standard is not applicable to safety valves and valves for liquefied natural gas (LNG). It is intended that the valve be designed and tested to satisfy a pressure rating (PN or Class). Valves may

then be selected with a PN or Class equal to or greater than the maximum allowable pressure (PS) of the equipment with which it is to be used.

NOTE a cryogenic fluid (refrigerated liquefied gas) is a gas which is partially liquid because of its low temperature (including totally evaporated liquids and supercritical fluids).

Voting is requested on the following options:

- Standard to continue unchanged in use for a further 5 years
- Standard requires revision
- Standard should be deleted

Any comments from BVAA members should be directed to BVAA for onward submission to BSI who will respond to CEN/TC 268 on behalf of UK.

New FieldQ Flameproof Valve Actuator & Control Module

The ATEX 137 directive sets workplace requirements within the EU for the safety and health protection of workers in potentially explosive environments. According to ATEX, approximately 50 percent of the industries operating in the EU are subject to hazardous areas and approximately 1/3 of companies within the process industries are subject to an environment with potential explosions.

Emerson Process Management's **FieldQ™** "fully integrated" rack and pinion pneumatic actuator and **Control Accessories** has set the standard for safety with its controls housed in an integrated package complying with ATEX 94/9/EC, PED 97/23/EC and the Machinery Directive 2006/42/EC, Appendix IIb. Operators are very familiar with FieldQ's field-proven plug and play capabilities in rugged spring-return or double-acting configurations.

The **FieldQ™** actuator has now been outfitted with an important new feature, the QC40's flameproof control module, adding increased safety in operating areas with explosive potential. The module offers a robust housing that protects pilot valves, feedback switches and pneumatic amplifier for a rack and pinion actuator against the most demanding process environments. The single piece flameproof and explosion proof housing is designed to withstand an internal explosion and is offered with FM, CSA, ATEX or IECEx hazardous area approval for use in Zone 1 or Class 1, Div. 1. **The product comes with the unique non-intrusive switch point setting allowing adjustment in potentially explosive areas without hazardous area downtime and replaceable cartridges that allow simple exchange of components for easier maintenance.**

The QC40's module range offers the perfect solution to those operators who have chosen Ex d as their standard protection method. The modules are available with a range of different switches and pilot valves to suit 24 VDC, 115VAC and 230 VAC requirements.

The new module adds to existing **FieldQ™** benefits from its "fully integrated" construction that includes a 20 percent savings in



New FieldQ Flameproof Valve Actuator and "fully integrated" Control Module Adds Protection in Potentially Explosive Environments

installation and commissioning costs. Substantial labor, material and time savings with its direct mounting construction can also be realized as can considerable flexibility in retrofitting into existing tight pipe runs with its compact footprint and low profile.

For more information, contact marketing.valveautomation@emerson.com or visit us at <http://www2.emersonprocess.com/en-us/brands/fieldq/Pages/index.aspx>

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Counterfeiting

The hidden threat to safety

Behind each and every successful product lie thousands of hours and probably millions of pounds in research and development. Not surprising then that there is often a queue of unscrupulous businesses waiting to capitalise by producing cheap copies.

Within any valve each component has been carefully designed and selected to work together to achieve the required performance. As a result, if any single component from the valve body casting to a seat or seal doesn't meet its expected performance criteria, the valve, its functionality and the process it serves are compromised.

Counting the cost

The consequences may just be an unnoticed reduction in safety margins or a shortening of maintenance intervals. At the other end of the scale however, product loss, heavy fines for excessive emissions or - worst case scenario - a catastrophic failure are equally possible and there is no way of knowing which outcome you will see. The use of counterfeit and substandard products is a total gamble with valve performance, putting production processes, the environment and potentially even lives at risk.

False economy

Unfortunately, it is often very easy to make a component or material that has the same appearance as a quality high-performance version for a fraction of the cost by compromising on raw materials or cutting corners in the manufacturing process. Present this counterfeit product at a price that undercuts the genuine article and there is big money to be made from users seeking to reduce their replacement part and maintenance costs. These counterfeit products however will not have undergone rigorous testing and will offer a very different level of performance under operational conditions. Sadly, the end user will only find out when it is too late and the counterfeit component suffers unexpected failure.

Nobody is immune to counterfeiting

Look for a successful product and you will often find



Devlon V-API valve seats

a victim of counterfeiting as sealing specialists James Walker have recently discovered within the valve industry with a number of their high-performance sealing products becoming victims. The company's world-leading Supgraf® compression packing products, its Devlon® range of thermoplastics and API metallic ring type joints have all suffered at the hands of unscrupulous counterfeiters looking to cash-in on the reputation of James Walker and the success of its high-performance products.

This first came to light when the company received a number of calls to investigate catastrophic product failures. Thankfully James Walker was able to test the products concerned and prove that the failed components were not manufactured by any James Walker company and were able to quickly get the customers back up and running by supplying authentic product. During the investigations it also came to light that some companies supplying the counterfeit products

This article was first published in Nuclear Exchange January 2013.



API Ring Joints and (right) Supergraf compression packing

and materials had even gone to the extent of falsifying original documentation to show the components were manufactured by James Walker. Whilst this was easy for the James Walker manufacturing businesses to disprove, the documents had been sufficiently convincing to persuade the customer into thinking they were purchasing authentic product. In these cases the damage to both the customer's production process and the supplier's reputation were minimised by prompt action, but it does leave the question – how many more 'counterfeit bombs' are ticking away out there and how much damage could they cause when they fail?

How to avoid counterfeit products

Notifying original manufacturers if you suspect you are being offered a counterfeit product will always help the legal fight to stamp out the problem but there are other ways to protect yourself and your business.

“If a deal looks too good to be true it probably is.”

If a deal looks too good to be true it probably is. By the very nature of the duties they are expected to perform, high-performance components for critical applications come at a price for a reason. Alarm bells should start ringing as soon as any supplier starts talking significant price reduction on critical components. At this point, demand a full 'paper trail'. If this really is an authentic product then the supplier should have testing, certification and case study paperwork immediately to hand. Even when dealing with a factor or wholesaler, this sort of documentation will be readily available from the manufacturer, who should be more than willing to confirm the suitability of the product for your application.

James Walker

James Walker

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By BVAA's Technical Consultant,
Peter Churm

**TECHNICAL
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Hot Spot ISO/CD 4126-11

ISO 4126-11 “Safety devices for protection against excessive pressure - Part 11: Performance testing”

ISO/TC 185 launched the CD enquiry on this draft standard which is registered under Vienna Agreement, ISO lead, between CEN/TC 69 and ISO/TC 185.

The CD enquiry closed on 4 January 2013 and CEN/TC 69 members were requested to provide their position (approval, disapproval, abstention) and comments by 28 December 2012. BVAA members were asked to comment to BVAA and the answers and comments were forwarded to ISO/TC 185 for consideration.

Emerson Digital Valve Controller Helps Chinese Chemical Plant Save \$40,000

After Emerson Process Management replaced existing valve positioners in the Shanghai Ethylene Cracker Complex (SECCO) with Fisher® FIELDVUE™ DVC6200f digital valve controllers, the SECCO plant gained better control, production efficiency, and uptime – and \$40,000 in annual maintenance savings.

SECCO is the largest integrated chemical facility in China. The complex includes a naphtha-fed ethylene cracker and ten downstream derivative plants with thousands of control valves of different brands, types and sizes. Temperature fluctuations in the process caused high variability in the end product which, combined with vibration of the pipeline, often led to damage and replacement of the positioners on these valves. After SECCO engineers and Fisher valve special-

ists from Emerson discussed ways to address this problem, SECCO decided to replace the facility's positioners with Emerson's Fisher FIELDVUE DVC6200f digital valve positioner.

The DVC6200f offers linkage-less, non-contact position feedback to reduce vibration-induced problems as well as diagnostics and FOUNDATION™ fieldbus communication to promptly alert operators of potential valve problems. The instrument is easily mountable onto any valve, which was especially important in SECCO's case. In addition, achieving high process reliability and performance is possible because of the DVC6200f's diagnostic capability to predict problems before they occur, allowing operators to take pre-emptive action to minimise process variability or avoid a plant shutdown.

After installation, operations in the facility were enhanced with better stability and control. Production efficiency improved, while waste and rework were reduced. Valve performance is more reliable, and uptime has increased because of less frequent valve failure and scheduled maintenance. SECCO has saved an estimated \$40,000 annually by eliminating the frequent replacements of positioners as well as maintenance, labour and potential production loss.

Emerson Process Management (www.EmersonProcess.com), an Emerson business, is a leader in helping businesses automate their production, processing and distribution in the chemical, oil and gas, refining, pulp and paper, power, water and wastewater treatment, mining and metals, food and beverage, life sciences and other industries. The company combines superior products and technology



Emerson's Fisher® FIELDVUE™ DVC6200f digital valve controller

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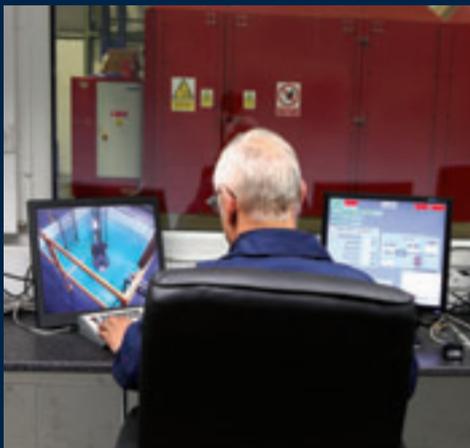
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The Use of Brushless DCV Motors in Electronic Valve Actuators

Prepared by: Earnest Carey, Jr. and Scott Wilkerson

Since 1929, electric valve actuators have been used for valve actuation, using both AC and DC volt motors. Motor technology remained virtually unchanged for years until the 1960s, when the evolution of brushless DC (BLDC) motor technology progressed to make them commercially attractive. However, it was not until the mid-2000s that BLDC technology migrated into electronic valve actuators.

Safety and efficiency are two non-negotiables in the control of plant systems. Each field device must not only meet, but exceed the requirements of users' specifications. The growth of fieldbus technologies has enabled visibility of real-time component performance and the need to optimize networked response. This means that previously accepted levels of performance for the electric actuator

are being replaced by expectations for better precision, safer and quieter electrical operation, and improved longevity. All of these attributes are included in an electronic valve actuator with BLDC motor technology.

Flowserve has been a pioneer, particularly with the Limatorque brand, in product development technologies that are new to electric actuation. BLDC motors have been in use for about 50 years but just recently have been employed in smart actuation. Their adaptation is key to improving process control and plant safety systems. Advantages include:

Low maintenance (no brushes)

- Variable operating speeds and fast response times
- High efficiency, resulting in cooler performance
- Compact size

DCV and ACV motors were developed in the 19th century, and ACV quickly became the preferred motor for converting electrical energy into mechanical force. Some users still prefer the DCV motor, but they require more maintenance due to susceptibility of the commutator assembly (brushes) to increased wear.

Several innovations through the years improved the efficiency of brushed DCV motors. The search to eliminate brush deterioration contributed to a significant breakthrough in 1962, when the motor commutator was replaced by a revolutionary new design, using solid state commutation. Because of stringent aerospace requirements for safety and reliability, BLDC motors with new and improved drive systems were developed. This technology was utilized in the Apollo space program in life support systems.

BLDC motors were, at first, limited to about 0.373 kW (0.5 hp), but



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Limitorque actuator installation

today motors up to 100 kW of power are available. They are routinely used in computers and spindle drives in CNC machine tools, typically any application that demands a high degree of positioning accuracy. Their performance characteristics exceed ACV motors in efficiency, starting torque, size to power ratio, and in speed and position control. Since 2007, several electronic actuator OEMs have designed new products with BLDC motors.

Reasons to Use BLDC Motors in Smart Actuators

To meet user demand for safe and reliable electronic control, smart electronic actuators were developed approximately 20 years ago. BLDC motors use sophisticated electronics such as motor controllers for control and safety. When communicating with mating motor controllers and other processors, BLDC motors offer superior performance and reliability — in addition to accurate speed control and precise valve positioning.

A disadvantage to using BLDC motors in actuators has been their higher cost when compared to ACV motors. The cost-to-benefit ratio has improved over the years, so the technology costs are practically on par with ACV motors. They do require motor controller electronics to drive them, but this too is proving to be an advantage.

A significant feature of the BLDC motor is the use of Hall-effect devices for determining rotor speed and positioning. These devices are fundamental to the performance of the motor because they provide immediate and accurate motor rotor position feedback to the motor controller for the purpose of regulating motor speed. See Figure 2 for an enhanced view of the BLDC motor, Hall-effect sensors, alignment cover and the sensor PCB.

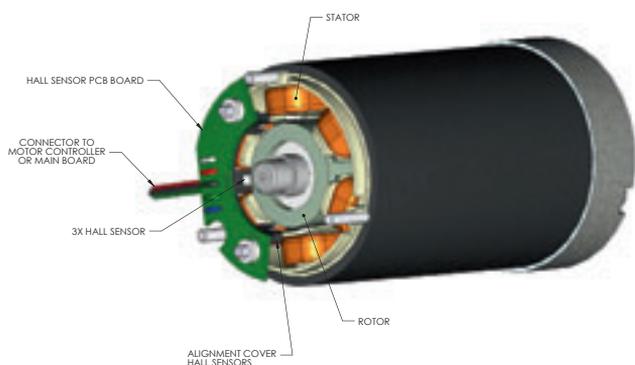


Figure 1: Typical BLDC motor

Like ACV motors, BLDC motors operate with variable frequency drives (VFD) without the EMI components. A BLDC motor can change its speed rapidly and precisely (e.g., a maximum 3000 rpm motor can vary its speed down to 200 rpm, and subsequently accelerate to 3000 rpm, depending upon a signal received from the motor controller. The speed and actuator position control is also improved when supplemented by encoders.

Absolute position encoders are essential components used to determine both actuator speed (rpm) and exact position. Absolute encoders in actuators should have at least a resolution of 12 to 18 bits for precise positioning. An actuator with a BLDC motor that incorporates encoder feedback appreciably enhances the device's ability to control both speed and position.

Another benefit of a BLDC motor is its ability to operate on both AC and DC main voltage. A typical BLDC motor is powered by a DC voltage bus. Since the vast majority of global voltage inputs are AC, a rectifier is required to create the DC voltage bus. The electronics must have the capability to rectify both single- and three-phase AC voltage inputs up to 600 VAC, as well as down to the BLDC motor bus voltage. Additionally, it should be able to support direct DC voltages of 125 to 250 VDC, and boost a 24–48 VDC site input up to the BLDC motor bus voltage. The use of 24–48 VDC is important for alternative energy such as the solar power industry or industries that use solar power as a primary power source.

As previously mentioned, electronic motor controllers are used to drive BLDC motors and are sized to match the power capability of the motor. While the motor operates cooler than other motor types, the thermal transfer of the motor's power produces heat in the motor controller, so sufficient thermal "chill" is needed to dissipate the heat. A well-engineered motor controller design includes heat dissipation.

BLDC motors can be used for virtually any global voltage requirement for On/Off valve control. However, the primary benefit is in process control applications. Electric actuators are equipped with an internal 4–20 mA controller that corresponds to a process position signal received from plant instrumentation for "modulating" applications. Initially, performance was limited to about 60–100 motor contactor "starts" an hour, but today many processes demand 1200–3600 "starts" per hour. As a result of the increased requirements, there can be significant stress to the motor and actuator drive gearing.

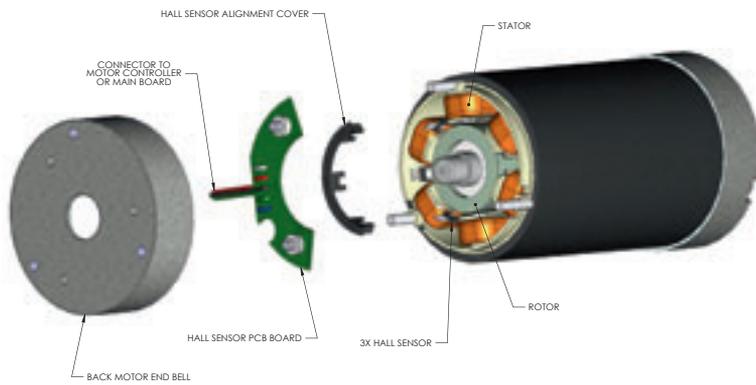


Figure 2. Components of the BLDC motor

One of the advantages of BLDC motors is its ability to operate cooler than ACV motors, due in part to the absence of brushes (friction) and their smaller size per torque output ratio. The ability of BLDC motors to run cooler and mitigate heat rapidly, while operating almost continuously, is critical to an electronic actuator exceeding 1200 starts per hour.

Finally, no brushes mean sparks are not generated, solving a major problem with DCV brushed motors: brushes generate electrical noise that causes EMI. A BLDC motor uses electronic sequencing of motor current in lieu of troublesome brushes. The elimination of sparks makes them more suitable to comply with global explosion-proof certifications. EMI reduction is important because it satisfies certain European directives

which have stringent conducted and radiated emissions envelopes.

In conclusion, in plant systems requiring increased levels of safety and control, users should consider BLDC-powered actuators. They are safe, due to the absence of brushes and cooler thermal characteristics. They are reliable, due to the evolution of their design over the past 50 years, and are used in industries such as the U.S. Space program as well as heavy machine tools. Finally, they are predictable, especially when coupled with electronic systems that work in concert with motor controllers and encoders. Although their use in electronic actuators is relatively new, their advantages will contribute to a growing number of users preferring BLDC motors in the coming years.



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Time served!

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When Heap & Partners London office received a call for some spare diaphragms it seemed like a normal and fairly unremarkable sales call. However following the usual questions regarding duty, it soon emerged that this was far from normal.

The Saunders diaphragm valves in question have been in continuous service for 75 years! They have never had their diaphragm changed and have never given any problems. Indeed the customer stated that they felt the one valve that now needed a new diaphragm only did so because two years ago they had decided to run the valve in the partially open position.

Whilst the duty of chlorinated water might not be the most aggressive or arduous duty a diaphragm valve has ever been asked to handle (after all they can handle any known fluid within their temperature and pressure envelope) there are very few valves that can boast that length of service. Furthermore how many products delivered in the 1930's still have spares available today? It is a testament to the original design that it has never been bettered. So whilst materials have improved and bonnets have changed (slightly) a spare diaphragm today will still fit a 1930's valve. One of the diaphragm valves many strengths.



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The time-served valve and its diaphragm (right)

PK Saunders invented the diaphragm valve in 1929 whilst working in the gold mines of South Africa to reduce compressed air losses. When he returned to England and set up the Saunders Valve company he turned to Heap & Partners to provide funding and a sales outlet for his new product. In the early days Heap & Partners were a shareholder and their biggest sales outlet.

It seems very appropriate that today Heap & Partners were able to provide the necessary spares, from stock, to hopefully keep that valve running for another 75 years, before its next service.



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Beware Of Substandard Counterfeit Thermoplastic Materials

Following reports of a number of catastrophic failures in service it has come to our attention that sub-standard copies of James Walker Devlon® V-API thermoplastic material are being offered to valve manufacturers and end users. James Walker Devlon® materials were developed in the 1980s – each variant specifically formulated to match the demands of a particular application. Devlon® V-API was developed to provide enhanced performance across a wide temperature and pressure range in valve seat duties with a comprehensive range of properties including wear resistance, impact strength and improved resistance to moisture absorption.

The original Devlon® thermoplastics are still manufactured at only one location in the UK, under strict process controls that ensure the required performance characteristics of each material are achieved and maintained. The product formula-

tions have never been revealed to any third party manufacturer and no other company has ever been granted a manufacturing licence.

Our thermoplastic materials are available through the James Walker network of companies and a select number of authorised distributors who work closely with our business.

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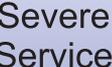


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ASCO Numatics - new solenoid valve manual operator removable under pressure

ASCO Numatics introduces a solenoid valve manual operator that is removable under pressure, enabling faster, easier commissioning and start-up while preventing inadvertent valve movement during plant operation.

It is often considered good practice to include manual operators on solenoid valves to enable functional checking during start-

up and commissioning. These operators are then removed prior to the plant being handed over to operations. This prevents potential plant trips or unplanned shutdown. Previously this would have meant depressurising the instrument air systems, a time consuming process and one that can add to the project schedule. The new removable under pressure manual operator from ASCO Numatics can be removed and re-installed while the pipe-work is pressurised, with no loss of line fluid or pressure.

"We believe this is the first solenoid pilot valve manual operator in the market that is removable under pressure," said Wim Van de Haar, ASCO Numatics' Marketing Manager for Oil, Gas and Chemicals. *"We work closely with our customers to understand the issues that affect them in their day-to-day work. The need for a removable under pressure manual operator was the outcome of one of these customer meetings."*

The removable under pressure manual operator is currently available for the 327 series of solenoid valves. The 327 series is a 3/2 pilot valve used extensively for control valve and emergency shutdown valve piloting. The 327 series is available in a range of body materials and with a selection of solenoid operators and certification. This makes it suitable for use in all of the major markets across the globe and in all hazardous areas.



The new removable under pressure manual operator from ASCO Numatics can be removed and re-installed while the pipe-work is pressurised

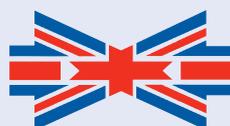
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CHAIRMAN'S STATEMENT

My first act as Chairman must be to congratulate my predecessor, Bill Whiteley, for leaving me an Association in a very healthy state of affairs and on behalf of all members I thank him for all his wise leadership and counsel over the last four years.

I'm pleased to add that the financial year ending March 2012 was one of continued achievement and success for the Association. Revenues reached an all-time high once again, as did membership, which continues to grow impressively each year.



A short break from Strategy discussions at BEL Valves for BVAA's Steering Group

A healthy surplus was achieved, aided by significantly improved Training income and some very cost effective BVAA gatherings. This surplus is all the more remarkable as the Secretariat also seized on an unbudgeted opportunity to expand the Banbury HQ during the latter half of the financial year, to develop a much larger training suite – the benefits of which are already being reaped.

As is traditional in a first year of BVAA Chairmanship, I was pleased to initiate a Strategic Review, with the help and assistance of my friends and colleagues on the BVAA Steering Group. The many actions arising from that are currently being rolled out by the Secretariat team.

An important aspect of this initiative is the shift further towards Business Development for our members, and I am very pleased to report that the relationship

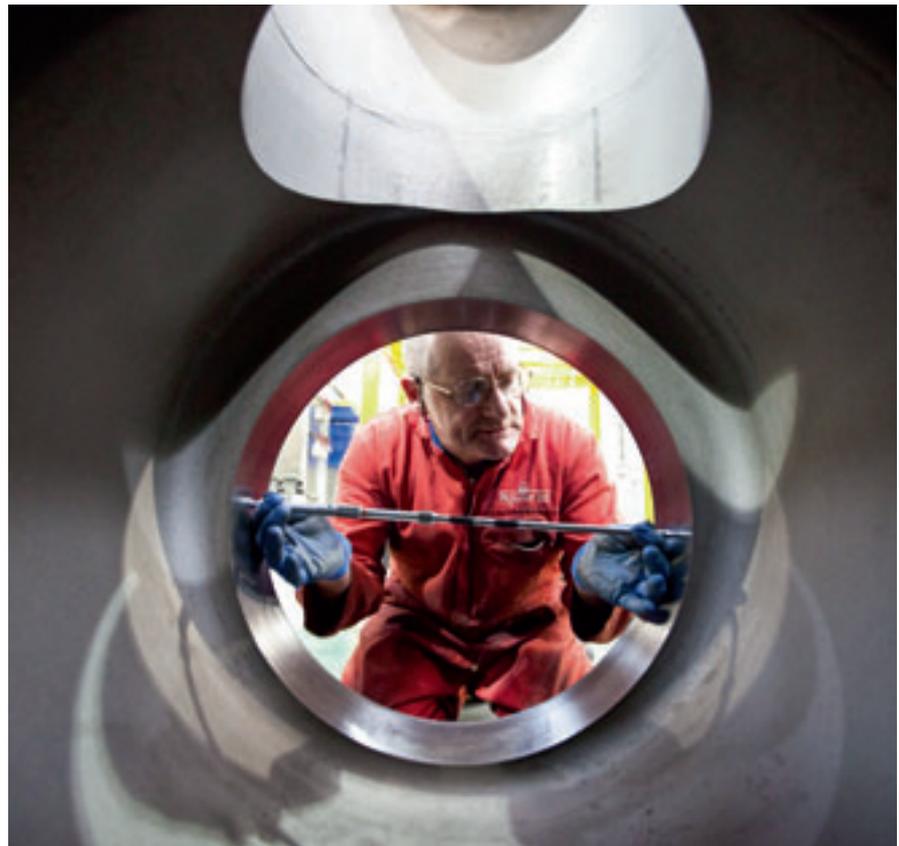
with our new business development partners, NOF Energy, is already paying dividends for those who avail themselves of their services.

We also held our first Customer Golf Day in the autumn, with 60 members and customers enjoying the bracing Scottish weather in Aberdeen. We also successfully re-launched our Spring Conference, to great effect and with some very supportive feedback from members. Our own industry magazine 'Valve User' continues to grow in reputation and stature and has become our flagship publication, renowned across the globe.

I would like to end with my thanks to BVAA Director Rob Bartlett and his small team at the Secretariat, who have continued to provide members with a very lean and efficient service.



Cover: Deep water subsea gate valve during hyperbaric testing (BEL Valves)



Business development is key (Provalve)



DIRECTOR'S REPORT

We have, without doubt, been extremely fortunate to experience a remarkable few years at BVAA. Last year our industry prospered again, and I am pleased to report that the British Valve & Actuator Association likewise continued its remarkable growth.

In an extended / double, perhaps triple-dip recession, many associations have understandably struggled to retain their membership. However we continue to grow at an average of about 15~20% per annum. We must be the envy of the Engineering sector!

I am delighted that we continue to grow all sections, however this year we have also welcomed several very large, key players into our ranks. We have also recruited well from symbiotic industries and – especially pleasing – seen the return of some lapsed members. These are, after all, the most difficult to persuade and I take pride in their return.

Such growth brings its own challenges – we are looking after a record 170 members with less staff than we had when looking after 55, and the skill sets needed to service them change and grow constantly too. I am pleased that this has been acknowledged by our board and steps are being taken to expand the staff in early 2013.



Rob Bartlett with Gerrit Nawracala, Project Manager Messe Düsseldorf

It is also gratifying that our finances remain in fine fettle, also at record levels. I am delighted to report this has as much to do with the success of our commercial activities as it does with membership recruitment.

Our new Chairman's Strategic Review was initiated and several brainstorming meetings were held with our Steering Group. These identified a number of improvements, new initiatives and expansions to services and we are busily integrating these into a busy work programme.

A key activity strand introduced following the Review was the Business Development Partnership with NOF Energy, which provides BVAA members with tremendous opportunities in the oil and gas sector, centred mainly about several dozen networking events but also importantly access to the organisation's highly experienced staff and Strategic Partners – many of whom are major valve and actuator customers. We have had a number of

enthusiastic endorsements from members who have already experienced success as a result of participating in these events.

An expansion of our Banbury HQ the previous year led to dramatic growth in our Training function, and I am delighted to report this was sustained last year too. We are diversifying a little and these sojourns into new topics are also proving successful. A huge thank-you therefore to our volunteer lecturers, without whom the training service just simply would not be possible.

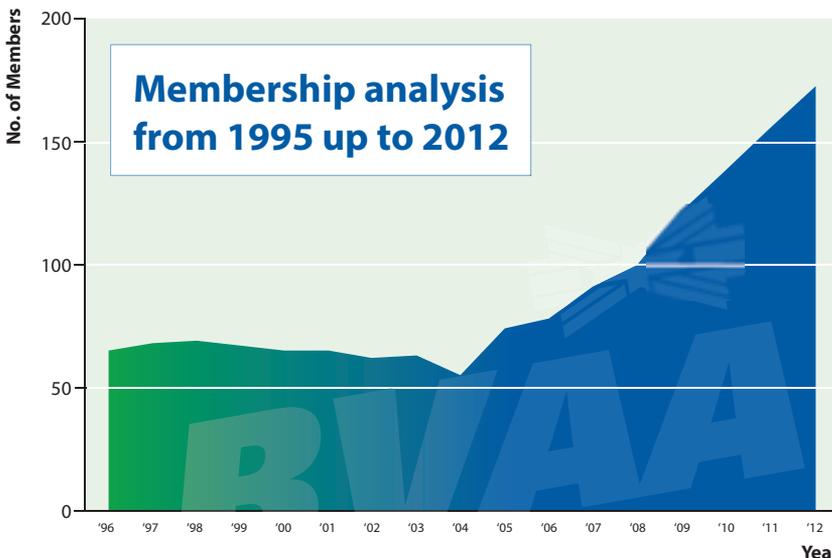
It is my pleasure to also thank on members' behalf the BVAA working group chairs, who do such sterling work for the Association and its members. Laurence Kettle (Marketing), The 'Three Peters' - Peter Hirst (Actuators), Peter Burnett (Valves) and Peter Churm (Repair) are invaluable as is Adrian Jefferies (Seals).



BVAA Director Rob Bartlett pictured at Valve World with l to r: Sylvia Tunmore, Director of Trade & Investment, British Consulate, Joachim Schäfer, MD Messe Düsseldorf and his colleague Friedrich-Georg Kehrer, Project Director.

A special, additional thank-you though to my colleague and friend Peter Churm, who provides both members and the Secretariat with unrivalled, cheery and tireless technical support and who continues to be a superb ambassador for our industry at home and abroad.

I would also like to take this opportunity to personally thank the association staff, Karen Webb and Barbra Homer, and our Accountant Chris Griffin, without whom the Association could not function so efficiently and of course our Steering Group and Executive Committee, for all their advice and support during the year.



Continued year-on-year growth at BVAA



TECHNICAL REPORT

Throughout this year, as the principal UK expert on a number of standards committees, my many activities have included continued work on International, (ISO), European (EN) and British (BS) standards committees.

A considerable amount of time has in fact been dedicated to attending these important standards meetings, and contributing to the essential drafting and commenting processes. Additionally, technical support has been provided to member companies, support and guidance to BERR and HSE on technical issues, attendance at - and support for - the BVAA Working Groups, and the regular writing of technical articles for the Valve World and Valve User magazines on behalf of BVAA has also consumed much of my time and attention.

It is worthy of comment that attendance of UK representatives at International standards meetings, contributing to the drafting and commenting processes, is most important and continued recruiting of standards committee members is vital to our industry. The general shortage of UK standards committee members is a worrying trend that we must address before we lose all of our influence internationally.

As you'd expect with a mature industry we write fewer new standards these days, often with far shorter lead times than in the past, but the vast library of published standards are routinely reviewed on their 5th anniversaries. The interests of the UK need to be vigorously represented when any – often fundamental - changes are being proposed to established standards, as



Standards Issues

The work on many standards continues...

CEN TC69 “Industrial Valves” work progress:

- 2 Draft standards are registered at Preliminary stage
- 5 standards are being revised
- 3 basic and 10 product standards are being prepared.
- 73 standards published or ratified by 2011/12

The following amendment was ratified in 2011:

EN 593:2009 + A1:2011 “Industrial Valves Metallic Butterfly Valves”

ISO/TC153/SC1 “Valves Manufacture, Marking and Test” work progress:

- 4 draft standards are registered at Preliminary stage
- 2 standards are being revised
- 3 draft standards are being prepared.
- 15 standards have been published by 2011/12.

The following standard was published under Vienna agreement during 2011:

BS ISO 4126-10 “Safety devices for protection against excessive pressure Part 10: Sizing of safety valves for gas/liquid two-phase flow”

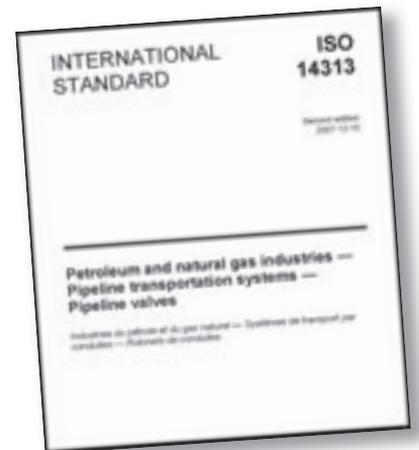
such changes can often have serious cost implications for manufacturers.

Provision of technical support for member companies continues at a high level with many requests for ATEX and PED clarification. BVAA training courses on these issues have been regularly presented at BVAA HQ training facility and also at valve users’ premises. It is surprising that so many years after their initial introduction, there is still a requirement for interpretation on these important pieces of legislation. I also regularly provide advice and guidance to BVAA member companies on a very broad range of standards and European directives issues.

Standards work in progress worthy of note includes:

- Detailed work completed on Fugitive Emission standards BS EN ISO 15848 – 1 and 2 to improve the emission measurement procedures.

Both standards have now been issued for Formal Vote.



This year’s challenge - ensuring commonality between ISO 14313 and API 6D

- Active participation in the ISO Working Group revising ISO 14313 Pipeline Valves to ensure commonality with API Specification 6D
- Active participation in the ISO Working Group writing ISO 16441 Petroleum and natural gas industries — Actuation mechanical integrity and sizing for pipeline subsea valves.





VALVE WORKING GROUP



Valve WG at CTI



Heap & Partners 8" 600 Stainless Steel Side Entry 'Phase' Ball valve



4" #600 Stainless Steel Ball valve under ISO 10497 (2010) Fire Test (Score Europe)

Meetings

In March 2012, the Valve Working Group met at Castings Technology International (Sheffield) and in September we had a meeting in Aberdeen where Apache North Sea and Moontown Ltd gave highly informative presentations.

We are continuing to try and focus our working group meetings with a mix of Technical standards issues and reporting, but also to address industry trends with topics which will hopefully engage our members from a Technical perspective.

We have two meetings already planned for 2013, with the initial meeting (March 21st) at ARC Energy in Gloucester. At that first meeting, we are planning to have presentation into the latest advances in Cladding Technology. The second meeting in September is yet to be finalised in terms of venue but will probably be alongside the Customer Golf Day once again.

Committees and Standards

The three high profile standards currently under review are summarised as follows;

- Detailed work completed on Fugitive Emission standards BS EN ISO 15848 – 1 and 2.
- Active participation in the ISO Working Group revising ISO 14313 'Pipeline valves' to ensure commonality with API 6D specification.
- Active participation in the ISO Working Group writing ISO 16441 'Petroleum

and natural gas industries – Actuation mechanical integrity and sizing for subsea pipeline valves.'

At this time, most of the standards in the ISO 4126 series 'Safety Devices Against Excessive Pressure' are finalised with much less Working Group activity on-going. Our thanks to Mike Gray and his hard working team for what has been a very successful programme of standards development.

API Standards

We have recently become aware of a wave of API standards that are being released into the American Market without entering the ISO process at the same time, sometimes not even at all. This is of concern since these can lead to certain end-user customers using them to justify higher product integrity for product supplied just to them, effectively creating a two-tier system of supply. Major oil and gas operators, who have an international presence, have been involved in the API20 series of standards released since 2011, so we would encourage them to use the International Standards route via ISO too.

Trends and Markets

From both a Nuclear and Oil & Gas perspective, there is an increasing trend from Operators and EPC Contractors to restrict the supply of Valves and other equipment from certain geographical areas, usually on QA grounds but sometimes due to materials issues, etc. This appears to be aligned with increases in the amount of Approvals imposed too, such as Norsok, on Mills and Foundries.

This also increases the NDT and NDE requirements being applied to the pressure containing and pressure controlling parts. 'Raising the bar' in this way can only be good for UK and EU Manufacturing companies.

It appears from my dealings with other Original Equipment Manufacturers and Suppliers to our Industry that current market conditions remain buoyant, and we look forward to tackling the technical and standards challenges that these market requirements generate.

I'd like to close with personal thanks to Peter Churm and Chris Williamson for their extensive input into the working group meetings and for representing us so effectively at overseas international standards meetings.



24" globe valve was internally clad with a 4mm thick coating of a corrosion resistant nickel based alloy (ARC Energy)



ACTUATOR WORKING GROUP



Joint BVAA/BSI Actuators meeting at Banbury

Meetings

The BVAA Actuators working group continues its strategy of meeting in conjunction with its BSI counterpart, BSI PSE/18/5, and two such 'combined' meetings were held at BVAA HQ on 27th March 2012 and also again on 4th October. These were interspersed with a meeting to input into at the BVAA Draft Code of Practice for Repair. The 'combined' meetings are a really useful concept and with the co-operation of our BSI Secretary, Mr Charlie Duncombe, and our BVAA Secretary Rob Bartlett, the Association and therefore the industry carry out its technical and standards work in a very efficient manner. After a very long break, there was also a meeting of the ISO/TC153/SC2 sub-committee on actuator attachments.

Interfaces

There has been international agreement for some time to review the interface standards EN ISO 5210 'Industrial Valves – Part turn actuator attachments' and its EN ISO 5211 'multi-turn' counterpart. As mentioned above the ISO/TC153/SC2 committee was eventually resurrected after 17 years of dormancy to enable discussions on the texts to finally take place. This meeting was held in June at DIN in Berlin and I was delighted to be joined there by Terry Little (Kinetrol) as a UK delegate as well as by Charlie Duncombe from BSI.

Around 20 delegates attended from around the world and Resolutions passed covered a formal revision of the interface standards and the setting up a dedicated working group to prepare drafts. UK

nominated experts have joined this working group, although we always welcome more UK expertise.

Technical revisions to the standards included:

- A proposal to add flange sizes to extend the torque/thrust ratings above those currently included
- To include linear actuator output attachments
- Consider the inclusion of dowelling
- Additional drives types (MT)
- An informative annex on sizing.



Mounting adaptors and drive couplings are major parts of an automated valve package (Quickits)

A proposal by China for the committee to produce an electric actuator standard was considered however it is outside the current scope of SC2. Enquiries will be made by the DIN secretariat as to the implications of widening the scope and the possibility of developing general actuator standards. Further ISO Working Group meetings will be scheduled in 2013.

ISO/TC67/SC2/WG18

This WG, in which we are active participants, is working on a new ISO 16441 'subsea' standard, "Actuator mechanical integrity and sizing for subsea pipeline valves" which is – very helpfully - largely



304 Stainless steel drive coupling and mild steel epoxy coated spool piece for 6" trunnion ball valve / scotch yoke actuator (Quickits)

based on our previous pipeline actuator work, ISO 12490, completed last year. After initial meetings the WG schedule was suspended due to a USA/ISO International membership dispute. It is understood that a way forward has been found and, if so, meetings should resume in 2013.

BVAA Valve Repair Code of Practice

Following completion by the Repair WG, the Actuator WG was asked to review the Code of Practice's draft text accommodating the repair of actuators, as they were included in the document's scope. An ad-hoc group comprising John Barraclough (Flowserve), Terry Little (Kinetrol), Ian Sully (Auma), Peter Churm (BVAA) and myself met at the Flowserve



Rotork's 3rd Generation IQ3 Intelligent Actuator, launched this year (Rotork Controls)

Limitorque's facility in Newbury on the 23rd May to amend the draft, which is being circulated for final comment.

Co-operation

I would like to close by thanking Peter Churm, my fellow WG members, and the BSI & BVAA staff for their valued co-operation and I look forward to future 'combined' meetings with the BVAA Valves WG, with whom we enjoy occasional meetings on common subjects.



24" Subsea Ball Valve with Hydraulic Actuation (BEL Valves)



SEALS WORKING GROUP



The real thing – a selection of packing products (James Walker & Co.)

Fugitive Emissions

Let me start by thanking Peter Churm and Chris Williamson (BEL Valves), who back in September attended another meeting of ISO/TC153/SC1/WG10, as the ISO 15848* standard continues to evolve, with several changes proposed this year which are now being voted upon. The major ones of note are that the CO1 endurance limit reduces from 500 to 205 stem cycles, and the class A tightness level is now one decade looser than originally used (and now aligns with the Shell standard). Also, in part 2 of the standard the class C tightness is reduced from 1000ppm to 200 ppm.

**BS EN ISO 15848 'Industrial Valves. Measurement test and qualification procedures for Fugitive Emissions. Classification System and qualification procedures for type testing of Valves'*

However, the ISO has never been particularly popular in the USA, where work continues to draft an API 624 standard for valve emissions entitled 'Type testing of Rising & Rotating Stem Valves Equipped with Flexible Graphite Packing for Fugitive Emissions'. There is already an API 622 which defines a test rig and method for evaluating the emissions performance of the gland packing, and the API 624 standard is the next stage, where a block valve test is being defined.

Whereas the ISO is a 'bagging' type of test with helium, the API tests use methane and 'sniffing', and the two methodologies have long been a subject of debate within fugitive emission circles.

It will be interesting to see how these standards fare in the future, as of course the API is written by the oil companies who

are under pressure from environmental regulators to take action. Therefore I suspect that this may eventually become the more popular standard, at least in the US market (I may have jokingly said before that by the time a unified single test standard exists, the problem will have gone away as the World will have run out of oil!)

There are fundamental problems with both tests of course. As Peter Churm pointed out in an article in Issue 23 of Valve User, it is well reported that there is a global shortage of helium, and once it escapes into upper atmosphere it is lost forever. Testing with methane of course does replicate to some extent the problems of leakage on a refinery site, but venting methane to the atmosphere after a valve test is surely just adding to the total greenhouse gas problem, from an industry seeking to reduce them. Perhaps there should be some kind of "X-prize" type of competition for developing a high tightness valve test method which is both safe and practical but uses neither of these gases.

British Standards

Whilst we have not had a BSI meeting this year, there remains the subject of BS 4371 'Specification for Fibrous Gland Packings', which is an old standard regarding the quality of compression packing. This originates from the days of old asbestos materials, but can be brought up to date if we feel that it is worthwhile. Of course the reputation of a quality valve



Emission testing of a valve stem seal using the 'sniffing' method (Adanac)

from a reputable manufacturer ought to be enhanced by having additional confidence in the seals used, and incorporating a packing to such a quality standard may assist in this regard. As far as I am aware there is no other national standard within the EU for packing materials, so this could well become the foundation if any CEN standard were to be produced on this subject. Any opinions and input from members on the value of maintaining or developing this standard is welcomed.



High integrity bolting plays a critical role in the valve industry (James Walker/ RotaBolt)

Counterfeiting

In Valve User Issue 24 we have highlighted the widespread and potentially dangerous practice of counterfeiting of sealing products. Just because a product looks the same as the quality seal you are used to it doesn't mean they are same – far from it in fact. Indeed in the BVAA Seals Course we do illustrate quite graphically what can happen when things go wrong and how seemingly simple seals are often taken for granted. Seal Users need to be vigilant as product packaging can be counterfeited to high a degree of quality even if the contents cannot. You should always audit the sources of your seals, and contact the manufacturer direct if you want to verify a product's origins or composition.

Training courses

The original two Fluid Sealing Courses have now been condensed into a single day course, which I enjoy delivering for the Association and for which we continue to receive excellent feedback. This course continues to cover bolted joints, compression packing and elastomers. This year the Academy of Joint Integrity has also joined the BVAA and are offering in conjunction with BVAA a hands on bolted joint integrity 'Master Class' at their facility in Cleckheaton.



REPAIR WORKING GROUP



Upgraded and overhauled Recycle Valve on Test Rig (Control Valve Solutions)



The Association's Repairer members typically have the very best facilities (Provalve)

Repair Code of Practice

The drafting of the new BVAA 'Code of Practice' was coming to a conclusion late last year following detailed input from BVAA member companies (valve manufacturers and valve repairers) - and of course valve users - over a period of three years.

Following its issue for comments to BVAA membership some minor changes were made and the document considered to be completed and submission for final BVAA Executive Committee approval was pending.

One issue however needed to be addressed. Upon receipt of the draft document the BVAA Actuator Working Group considered that, in addition to the repair of actuated valves covered by the document, more detailed information

should be included relative to the actual repair of actuators themselves.

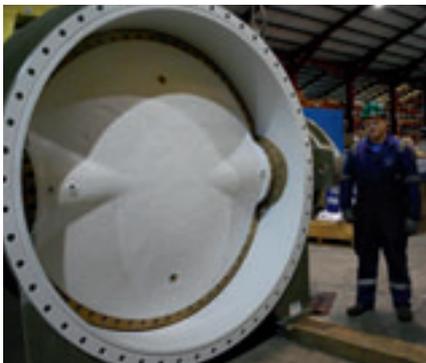
Our Actuator WG therefore reviewed the document in detail at a special meeting in May hosted by Flowserve Limatorque. The WG submitted recommendations for some changes and inclusions to the text to fully cover the repair of actuators. These proposals have been considered and included where necessary.

The next, imminent step is to issue the revised document to the membership for comment and approval, prior to

submission to the BVAA Executive Committee for their endorsement leading hopefully to final publication this year.

Training & Qualifications

The Repair WG came back to the subject of repair training, tests of competence and qualifications again and again during our discussions and it is clearly a topic in need of addressing. The BVAA is rapidly expanding its Training function, and we hope that eventually consideration to tackling this difficult, complex subject could form part of our industry's strategy.



84" Butterfly valve fully refurbished and hydro tested on rapid two week turnaround for Scottish Southern Energy (Score Europe)



Rob Bartlett opening CVS's new facility in Portlethen



MARKETING FOCUS

BVAA's Marketing function is an extremely important activity strand, and one which came under close scrutiny as part of our recent Strategic Review.

Our Steering Group decided that our Marketing forum should be a much smaller, more agile body, and consequently we disbanded the old committee and replaced it with a small Focus Group comprising myself, Andy Will (Heaps), John Hancill (Emerson) and Stuart Billingham (KKI) plus BVAA's Rob Bartlett, and each will lead will specific areas of Marketing activity.

We are now in a stage of transition, and while many services and activities will continue, some will change, and we are now looking at new initiatives coming out of the review. There are quite a number, so more frequent meetings will be necessary, but this year we had meetings in May to propose our agenda, and December to take those work packages forward, plus feedback sessions with the Steering Group.



Marketing Focus Group discussing the new website with our web developer

Business Development Partnership with NOF Energy

Andy Will is leading the Group's liaison with NOF Energy and assisting the Secretariat with guiding the operation of the partnership.

One of the key benefits of the partnership is the opportunity for BVAA members to attend the many NOF Energy networking events which usually have important clients as guest speakers. Since we have a relatively narrow focus it has become clear events and networking lunches have to be with the right clients to be attractive



to our members, so it's pleasing to report that several highly 'valve-relevant' events are now in the diary. The events also have the unique '1-to-1' introductions service that makes the networking element extremely effective.

The Marketing Group have ensured that the partnership has been widely publicised, as have the additional benefits available to BVAA members such as; the overseas missions, 10% discount on full NOF membership (1st year), the opportunity to attend their Supplier Day, exhibition stands at events, etc. We have also been actively encouraging members with positive experiences from the events and services to share these with the wider BVAA membership. We will also be identifying our own targets for NOF for future events and looking at possible visits to Engineering houses in other European cities. A successful 2-day clients visit was organised in Aberdeen late last year and another in Reading is being developed.

Exhibitions

Our exhibition strategy currently includes taking a stand at Achema every 3 years and we did so again in the summer. Despite its vast size the chem-industry event proved a little disappointing and we're going to review future participation. Offshore Europe is bi-annual and traditionally a good event for the Association. The Secretariat is in the throes of preparation for, and eagerly anticipates, the September 2013 event.



Valve World is widely regarded as the 'valve industry event' and the 2012 Dusseldorf Expo

was the most impressive yet. BVAA took a Group Stand with members Dynamic Ceramic, Mogas, Total Carbide and Maher taking booths around the outside. The VMA and their members also joined us in sharing the space – a co-operation spanning 8 years. The BVAA hospitality area was swamped all week and proved extremely popular with members and guests. Also popular was the 'British Reception' which received 200 guests and which is rapidly becoming a Valve World tradition, and which subtly promotes the British Valve industry.

New exhibitions in other industries/regions remain under review with OTC, Adipecc, Rio Oil & Gas, PowerGen International (Las Vegas), Pharmex (New York) all under discussion. Members will also be polled for their views on exhibitions.

Valve User

BVAA's own publication is unique in that it is deliberately run as a service for members and consequently they can have a superb presence in the industry's leading magazine at no cost. Valve User continues to grow in size and reputation and it truly one of BVAA's greatest success stories.



The Secretariat recently undertook a total review of the subscription list and members can now be assured that the readership is not only high quality but also actively wants the magazine. This is underlined by the thousands of magazines that are also handed out at exhibitions each year. Recent improvements also include a radical increase in technical information via Peter Churm's 'Technical Hotspots' features.

BVAA Websites

Another part of the recent Strategy Review was a complete vision of the BVAA's websites. The main Association site www.bvaa.org.uk has been re-launched following a comprehensive overhaul, which focussed on simplification and ease-of-use and to emphasise BVAA Training Courses, Product Sourcing, Valve User magazine and 'Your BVAA' (BVAA Services). The Product search facility has also been improved with a predictive-search capability and simplification of the product classifications. The valveuser.com website – now a rich source of product and technical information – will follow a similar process shortly including web optimisation.



BVAA Website

Market Reports/Statistics CD

We once again circulated the latest EIF Global Markets Forecast, one of BVAA's most eagerly anticipated services, issued without additional charge to members. A 5 Year Forecast covering the 63 most industrialised countries, by end user industry and product type, certainly provokes a lot of interest.

BVAA DVD

With so many updates to the products and services members supply, and the many new members of course, yet another edition of our world famous BVAA DVD had to be produced, this time to coincide with the Valve World exhibition in Germany. With promotional and technical literature from over 170 BVAA members, the DVD certainly makes collecting information a lot less labour intensive! As ever all the BVAA guides on Directives, Valve User magazines etc. are also included free on the disk.



BVAA at Valve World



BVAA Literature DVD and EIF Report

ACTIVITIES

BVAA AGM

The BVAA 2012 AGM moved back to its more traditional December slot this year – which proved a little nerve-wracking when the snowy weather began to close in but mercifully held off. The venue was the remote but beautiful Slaley Hall in Northumberland and its attractions led to one of the largest BVAA gatherings since our 70th anniversary event in 2009.

The Executive meeting was a little different this year as we gave the morning session over to Alan Beaulieu of ITR Economics, with his presentation ‘Make Your Move.’ Hailed by one member as ‘the best presentation I’ve seen in years’ Alan held the BVAA Executives enraptured for two hours – no mean feat for an economist! We also had a partners’ programme and our thanks to Liz Kirkbride for organising a Christmas Wreath making session, much appreciated by all who attended.

BVAA Conference Returns

After a break of some years, BVAA arranged a Spring Conference this year, handily held in May at The Belfry, Sutton Coldfield, so the opportunity was also taken to organise another BVAA Golf Day.

The Conference itself was well attended by members and guests, with a wide variety papers by Dr Yuri Zhuk, Technical Director of Hardide, on his company’s wear resistant coatings, ‘API 622 & API 624 Fugitive Emissions standards’ by Barrie Kirkman, BVAA’s new ‘Commercial Risk’ course by lecturer Brian Joseph, an update on the ‘UK’s New Nuclear build’ by Keith Parker, CEO of the Nuclear Industries Association, ‘Making Sense of Metal Prices’ by Alan McLelland, CEO National Metals Technology Centre (NAMTEC), ‘6MO in offshore applications’ by Stuart Jessop, Parker Hannifin plc, and an introduction to the new BVAA/NOF Energy Business Development Partnership by George Rafferty and Joanne Leng. The day concluded with a special, extended presentation by the world renowned expert on Business Growth, Richard Denny.



Richard Denny

Membership

It’s been another excellent year for recruitment of new members to the Association. Although now a regular occurrence, we are never blasé about recruitment and never take new or indeed old members for granted. At BVAA we strive constantly to improve the value of membership with ‘no extra cost’ services wherever possible - the NOF Energy partnership being a great example.



Slaley Hall, Northumberland



Barrie Kirkman describes fugitive emission standards at the Conference

Alan McLelland explains why metal prices do not necessarily mirror the economic cycle

Stuart Jessop explains the rise in usage of 6Mo and similar alloys



BVAA Golf Society

The Golf Day held in conjunction with the May Conference was also a tremendously popular event, with 36 BVAA golfers taking advantage of the hottest day of the year. Much fun was had by all and the competition was eventually won by the joint Score Europe/Heap and Partners team.

A slightly different approach was taken for the September gathering, which was intentionally run as a ‘Customer Golf Day’ – a chance for members to entertain their customers under the banner of the BVAA and kindly organised on the ground by members



BVAA Golfers enjoying the weather at the Belfry

HS Pipeequipment. This time 60 golfers participated at Murcar Links, Aberdeen. Battling the bracing weather was as challenging as the course, but eventually the Cameron team won a very close competition.



Getting to Know Subsea 7 – a typical NOF Energy Networking Lunch

NOF Events

The BVAA / NOF Energy partnership has led to a number of useful networking events over the autumn, with the events with Petrofac and AMEC understandably among those generating the greatest interest among for BVAA members. The presentations are always keenly received, but the networking ‘one-to-one’ introductions with key suppliers and customers are always very popular.

A visit to major clients in the Aberdeen area in December also drew a good valve industry attendance, taking in visits to Tecnip, AMEC, BG and Aker, with each client presenting on a similar format - namely description of the company, its current and future activities and spend, with full contact details and Q&A sessions. It quickly became apparent that valves are a pinch-point for several clients in the region and BVAA is co-operating to explore initiatives as to how members can assist clients in this regard.

The big event so far however has been the Talisman presentation in January 2013. Over 150 delegates attended

and 15 BVAA member companies were represented, and although the nationwide snow storms were an unwelcome feature, the event was timely as it allowed a full report on the Talisman/Sinopec tie up, one of a number of Sino/western energy company partnerships being mooted.

BVAA Desktop Exhibitions

BVAA’s own Desktop Exhibitions remain as popular as ever. In the last year we organised events at Amec London, Score Europe in Peterhead and also more recently at KBR in Leatherhead.



Valve Industry Innovation at Score Europe



KBR Leatherhead



Just some of the BVAA’s new recruits this year

Who are 'They'?



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

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

But just who are 'They'?

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

Faceless people? Not us!



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



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Email: enquiry@bvaa.org.uk
www.bvaa.org.uk

TRAINING



Standing room only at the inaugural Joint Integrity Master Class

The BVAA Training Service has continued its dramatic transformation and continues to grow year on year!

The annexation of some neighbouring office space the previous year allowed us to take the Training Floor capacity up to 32 seats, which we routinely fill. We also recently invested further in some improved audio/visual capabilities, and yet more demonstration equipment, making the dedicated training facility now a world class operation - something in which we take great pride.

Course throughput put has increased again and we will have significant growth in both numbers of attendees and revenues once again by year end. BVAA courses are however incredibly good value due to the extremely competitive fees we charge, discounted further for BVAA members.

New courses have also come on line, such as the recent Joint Integrity 'MasterClass' course held at The Academy of Joint Integrity at Cleckheaton, which was over-subscribed on its very first running. We have also developed some combined 'Valve and Actuator' courses for particular clients which we intend to offer to the wider public. Work is also on-going to develop an 'Advanced Valves' course - a natural follow up to the very popular Basic Introduction.

BVAA courses are routinely updated in response to each set of feedback sheets. However work is also in hand at the moment to smarten up, standardise and modify the course presentation materials - we hope to implement that new look and material in the early part of 2013.

Offsite courses continue to be popular, and we are very grateful to our team of volunteers for taking the time and trouble to remain available and in constant readiness for the needs of our customers, as well as our own industry's trainees. We are also available to develop bespoke courses, as we recently did for a return visit from the Health & Safety Executive's COMAH team.

Last year we successfully launched a new course entitled 'An Introduction to Managing Commercial Risk, Contracts & Agreements.' Feedback on this innovative new course has been incredibly positive and this too we have run 'in-house' for clients at their own premises.

This year we are introducing yet another new course - a one day Business Growth Workshop, delivered in conjunction with the world renowned Richard Denny Group and formulated after consultation interviews with highly successful Valve companies.

Scheduled BVAA course dates are already fixed for spring, summer and autumn 2013. Details can be found at www.bvaa.org.uk/training or contact karen@bvaa.org.uk



HSE team at BVAA

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CRANE ChemPharma Flow Solutions® Launches New DEPA® Diaphragm for Chemical Applications

CRANE ChemPharma Flow Solutions®, a leading provider of highly engineered products for fluid handling applications worldwide, has announced the introduction of its new DEPA Nopped S4® Diaphragm for chemical processing applications.

Featuring an innovative “nopped” surface, designed to create advantageous flow conditions emulating the effect of golf ball dimples, the DEPA Nopped S4® Diaphragm is a versatile, state of the art industry solution. The use of Santoprene® as its core material, a substance uniting elastomer (EPDM) and polypropylene (PP), in synergy with its chemical and mechanical properties offers enhanced flexibility and resistance against abrasion, extending the lifetime and corresponding economy of operation and maintenance. The DEPA Nopped S4® diaphragms are designed for applications in chemical industries, e.g. basic chemicals, paints, varnish, coatings, and heavy duty industries, for which they meet or exceed relevant industry standards.

The efficiency and reliability of DEPA Nopped S4® Diaphragms is further enhanced by the modular principle guiding the design of DEPA pumps and diaphragms, and are freely interchangeable between various models of DEPA pumps, further adding to their lifetime economy as spare/component parts inventory of the diaphragms can be reduced.

“CRANE ChemPharma Flow Solutions strives to remain at the forefront of innovation, and the new design of the DEPA Nopped S4® Diaphragm continues in that tradition,” said Sandra Hoffmann, Global Business Line Manager, CRANE ChemPharma Flow Solutions, DEPA. “Its versatility, durability, and contributions to efficiency make it a remarkable

The new DEPA Nopped S4® Diaphragm for chemical processing applications



addition to CRANE's comprehensive product portfolio and it offers the industry a greater range of effective and progressive solutions.”

The DEPA Nopped S4® Diaphragm is in compliance with Machinery Directive 2006/42/EC. It is available in 5 sizes from DL15-80 / ½"– 3", it can operate within a temperature range of -20° C to +110° C (-4° F to 230° F), and a maximum 7 bar operating pressure.

Product features summary:

- **Innovative:** Pioneered the nopped design utilizing a thermoplastic elastomer (TPE) diaphragm material
- **Durable and Efficient:** Improved energy efficiency compared to previous versions of TPE diaphragms, the innovative nopped design and its use of Santoprene (material) offers excellent performance while enabling longer service life
- **Cost Effective:** Offers lower cost of operation, reduces demand for spare parts inventory, lowers maintenance downtime, and consequently increases plant capacity
- **Versatile:** Interchangeable among the DEPA® pumps ranges (modular design)

CRANE ChemPharma Flow Solutions™ designs and manufactures a variety of high performance products including: sleeved plug valves, lined valves, process ball valves, high performance butterfly valves, bellows sealed globe valves, aseptic and industrial diaphragm valves, actuation, lined pipe, fittings and hoses, and air operated diaphragm and peristaltic pumps. Our trusted brands DEPA®, ELRO®, KROMBACH®, Resistoflex®, REVO®, Saunders®, and XOMOX® offer our customers complete and innovative fluid handling solutions designed for the most demanding corrosive, erosive, and high purity applications within the chemical, biotechnology and pharmaceutical industries.

Santoprene® is the registered trademark of Exxon Mobil.



Crane ChemPharma Flow Solutions

Tel: 01633 486 666
www.cranepharmasolutions.com

Duxvalves – Company Profile

BVAA new-member Duxvalves is an internationally renowned leading original equipment manufacturer (OEM) of sophisticated severe application production choke and control valves supporting companies within the oil and gas industry. Its unique design application features give high erosion resistance, substantial reduction in noise, lower downtime and easy, minimal maintenance resulting in lower lifetime cycle costs. Ultimately, this extends the mean time between failure (MTBF)

generating a reduction in total cost of ownership (TCO). Individual solutions for critical processes are supported by efficient, reliable and guaranteed short lead times and first class field service and support.

Commitment to continuous improvement has fuelled investment in research and development, to enable Duxvalves to challenge the most severe of applications and provide world class innovative and dynamic advanced technology solutions.



Duxvalves Angle Type Choke valve with flexi flange and actuator

Duxvalves App

Duxvalves has recently created a Duxvalves 'App', available for iPhone. Just search for 'Duxvalves' on the iPhone App search facility or direct via <https://itunes.apple.com/gb/app/duxvalves/id581365995?mt=8&uo=4>



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Improving Process Efficiency With Wireless Valve Automation

The economics and simplicity of wireless field instruments has allowed many industrial plants to expand the benefits of automation well beyond traditional “wired” control.

By Kurtis Jensen

Wireless technology has created monitoring applications for safety, reliability, maintenance, environmental compliance and increased personnel efficiency that are possible without incurring the traditional cost and time barriers imposed by wires. Globally, plants are replacing manual clipboard rounds, automating periodic inspections and monitoring more assets than ever before because of these new

applications. But what is the status of wireless control of valves in particular?

The case to automate

Engineers know there are advantages and consequences to every design decision. To understand the benefits of wireless for control of valves, a fresh look at the two basic types of control is needed: closed loop control and open loop control.

Traditionally, in a distributed control system (DCS) or programmable logic controller (PLC), closed loop control implies wired signal inputs applied to logic or a Proportional-Integral-Derivative (PID) algorithm to drive a signal output to a final control element—most often a valve. Traditional technologies include pneumatic, analog wired or bus wired. If the decision to automate was left to the process engineer, every valve would be automated. However, the cost of wired installations ultimately means that over 60% of valves remain manual—primarily on/off quarter-turn valves.

When financial analysis indicates a project’s cost is too high, an engineer’s fallback option is to select open loop control, where no automated feedback from the valve is used. This operating tactic is primarily made to get the control signal to the valve, and if something does not happen when it should, a human must determine if the desired change took effect. Automation budgets can focus on the throttling control valves and the on/off valves that are either part of a safety shutdown system, that operate very frequently or that are too big to be manually actuated. The rest are left to manual operation.

People are the most important asset of any business, and people are affected by the consequences of open loop control. This is especially true in older plants trying to compete

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with newer plants or plants built with lower costs for labor and fewer governmental regulations for safety and the environment. When interrupted, distracted people make mistakes, take time to get to valves and become susceptible to plant hazards. Imagine the impact to process efficiency if the benefits of closed loop control could be obtained without the cost of wiring infrastructure. Imagine the advantage of reducing valve alignment time from hours to seconds, preventing human error that results in environmental spills or lost batches with associated cleanup costs, and minimizing worker exposure to ladders and chemicals that impact safety initiatives and productivity. These are possibilities with wireless technologies.

Alternative to solenoids and handles

The traditional method for closed loop control with an on/off valve is to use a solenoid and two limit switches. From an automation perspective, this can be more expensive than a throttling control valve because the process requires one discrete output and two discrete inputs into the DCS.

The input/output (I/O) points, wires, engineering, materials, labor, project management and time costs are considered during the project planning phase; with just a solenoid or manual valve containing a handle, the costs are lower. A solenoid with no feedback leaves a process susceptible to operation with a stuck valve, and a handle creates the opportunity for human error. Wireless control eliminates both of these weaknesses of open loop control for valves in such a way that the loop can be closed on a budget. With a wireless device, the added costs of sending back the valve's position are included with the instrument, making it easier to automate more valves in the project planning phase.

Maintaining essential work practices

Emerging wireless controllers for valve automation essentially combine solenoid functionality with limit switch feedback into an integrated package that has all the benefits of digital communication and diagnostics, but is also powered by a battery. The result is that only a pneumatic source is needed to automate that valve. This capability maintains essential work practices while eliminating the barriers that result in just 1-2% of existing manual valves being automated annually. Here's how:

Design Selection

A wireless controller is an alternative to a solenoid or digital bus-based controllers that still require wires. The wireless controller uses the same pneumatic actuator and valve. The selection criteria for choosing the valve and the actuator remain the same (Figures 1 and 2), overleaf.

Application Selection

A wireless automated on/off valve is the ideal replacement for a valve currently actuated by a worker. The wireless controller eliminates the potential for human error and allows work practices to be automated into interlocks and safety checks. A wireless controller is an alternative to solenoids for applications that are not part of a critical safety shutdown system. It's also faster than those humans (Figure 3).

Control System Integration

The simplicity of wireless control ensures that a digital set point for open and close can be sent from the DCS or PLC and can receive position feedback from that same field instrument. A wireless controller is connected to a wireless network in an arrangement

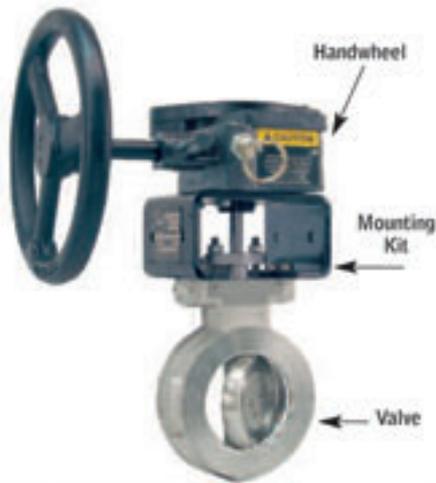


Figure 1. Manual valve



Figure 2. Typical valve automation package



Figure 3. Wireless valve automation package

similar to traditionally wired I/O; however, the set point and position feedback are wireless—another type of I/O that can be integrated into interlocks, timing sequences and logic just like the wired alternatives.

Operation

A wireless automated valve is operated the same way as a solenoid and limit switches. When the right logic conditions exist or action is executed from the control system, the valve moves and reports back the position to the control system for confirmation of the change. If the valve does not move because of mechanical failure, the operator receives an alert that can be diagnosed remotely by looking at the valve position or investigated more closely using remote access to diagnostics of the valve assembly. For typical applications, a battery-powered valve should have the same life as a wired alternative in terms of valve cycle life and years.

Budget Approval

When estimating budgets using wireless automated valves, the material cost of wires, cabling infrastructure, junction boxes, engineering time and cost for connecting to the control system, labor time and cost for electrical installation can be eliminated, and the reduction in time spent managing these resources and schedule should be considered. Removing these barriers to project approval and adding the benefits of reducing consequences of human error and exposure to hazardous environments can ensure project approval.

Wireless for automated controls

Engineers can deploy wireless automated valves to increase the effectiveness of their controls and decrease costs caused from mistakes and reworks. They can achieve a competitive edge by increasing the production levels of their facilities and reducing delays of waiting on labor to either make a change or fix the product. The result is better throughput, reliability and quality.

Engineers should look for solutions that are multivendor and can be used globally. They should look at the tools needed to use these solutions. For example, they should determine whether they can use the same handheld configuration device for both wired

and wireless instruments. From a wireless perspective, the network should be able to mitigate obstacles in the process environment, provide redundant paths for reliable communications and coexist with other wireless communication sources. If a wireless engineer is needed to perform a site survey and implement the wireless network, alternative wireless technologies should be considered.

The take away

Wireless has been used for years for monitoring applications to extend the benefits of automation beyond process control. The technology has proven itself, and on/off automation can eliminate traditional cost and engineering barriers. Whether it is for a fill, feed, flush, bypass or other type of valve application, wireless automation can improve process efficiency, reduce costly mistakes, and improve worker safety and productivity. As wireless continues to prove its worth through closing open loops for off valves, look for other wireless closed-loop alternatives in the future.

Kurtis Jensen is an instruments product manager at Emerson Process Management, representing Fisher and Valve Automation Products. His responsibilities include control accessories and related field instrumentation. Reach Jensen at kurtis.jensen@emerson.com.

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Edgen Murray Expands Valve and Actuation Offering with acquisition of HSP Group

Acquisition complements Edgen Murray's current service to global oil and gas customers by adding valve brands and actuation services with a focus on upstream, refining, petrochemical and power applications.

Experienced valve staff and an established international footprint provide hubs for greater international outreach, particularly in the United Kingdom, Middle East and Caspian regions.

Edgen Group Inc. through its subsidiary, Edgen Murray Europe Limited, a leading global distributor of specialty steel products for energy and infrastructure markets, has acquired UK-based HSP Group Limited (HSP) to enhance its valve and actuation offerings to customers around the world.

HSP sells valves and actuation products and services to customers in global oil and gas offshore, refining, petrochemical and power markets from locations in the United Kingdom, Qatar and the United States. HSP distributes ball, gate, globe and check valves through long-standing relationships with leading global manufacturers.

"HSP has a strong reputation for technical knowledge, responsiveness and attention to detail in the United Kingdom and the Middle East, whether customers require long-term project packages or immediate MRO (maintenance, repair and operations) supply," said Craig Kiefer, Edgen Murray's president.



"The integration of the HSP business will allow us to better meet the needs of our shared and new customers in the energy sector across Europe, the Middle East and Caspian region."

Dan O'Leary, Edgen Group's chief executive officer added: *"HSP is a company whose strategy complements our own - to create and sustain mutually beneficial relationships with oil and gas customers for specialised material supply. We expect the products, services, locations and expertise acquired in this transaction to have an immediate benefit to Edgen Group, both operationally and financially."*

HSP's chief executive officer Peter Everett and his staff have joined Edgen Murray.

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EDF Energy selects Hardide coating for nuclear plant valve application

Advanced surface coating company Hardide Coatings has secured EDF Energy as a new customer and has been specified as a cost-effective, high-performance solution to extend the life of the boilerfeed steam valves at Hinkley Point B nuclear power station in Somerset, UK.

The gain comes as the AIM-listed company reported a 49% increase in flow control revenues making a major contribution to a record £2.91 million turnover in the 2012 financial year.

Graham Young, Steam & Rotating Plant Engineer, EDF Energy, owner and operator of Hinkley Point B nuclear power station said: *"Hardide offered a very cost-effective, high-performance solution to extend the life of the 15MW boiler feed pump steam valves in the plant at Hinkley Point B. We evaluated four options, including other hardface coatings, before selecting Hardide for several technical and financial reasons. The coating's ability to coat internal surfaces evenly, its performance in testing and the ease of*



Components being loaded into Hardide reactor for coating

implementation and maintenance made Hardide the solution of choice. It has enabled us to continue to use the existing equipment which would be very expensive to replace, as well as require validation and safety case development, and will allow us to operate smoothly between planned outages."

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"There were technical challenges in applying the coating process to the large stellite 6 valve covers and Hardide provided excellent troubleshooting support and delivered the parts in time so as not to affect the availability of the power plant equipment. Spare valve cover guide sleeves have also been ordered and these will be deployed onto the other unit in the near future. We are also evaluating Hardide for other applications within EDF Energy."

Phil Kirkham, CEO of Hardide Coatings commented: *"Securing EDF Energy as a new customer and solving this challenging problem at Hinkley B demonstrates the ability of the Hardide coating to provide a cost-effective and technically superior wear solution in critical applications. We are working with EDF Energy on other opportunities and look forward to developing a long and productive working relationship."*

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Valve Tech Acquisition Boosts EnerMech's Australian Valves Division

EnerMech has completed the first of five acquisitions it has planned for the next six months with the acquisition of Melbourne-based Valve Tech Engineering in a multi-million pound deal.

Established over 20 years ago, Valve Tech is a well respected provider of servicing, engineering, modification, testing and supply of valves to the oil and gas, power generation, petrochemical and refining industries throughout Australia.

EnerMech is an Aberdeen-based company which provides mechanical services to the energy industry, with bases in 15 countries and annual sales of £140 million (AUD\$213 million).

Valve Tech founder and managing director, Chris Tabone, will take a new position in the enlarged business, heading up EnerMech's valve offering in Australia.

The deal represents a major expansion of EnerMech's global valve services, procurement and manufacturing network and complements its existing valves supplies and servicing facility in Perth, Western Australia.

EnerMech managing director, Doug Duguid, revealed the company would invest £10 million (AUD\$15 million) in its Australian business over the next two years and plans to open bases in Gladstone, Brisbane and Karratha to better service oil and gas, power industry and mining clients.

EnerMech views its valves business line as a vital element of its growth strategy in Australia, where it plans to more than double its workforce to 180 in the next 12 months.

Mr Duguid said: "Valve Tech is an excellent strategic fit for our business and gives us significant maintenance and repair capabilities in addition to our existing offering in the region. It strengthens our geographic reach in eastern Australia and introduces EnerMech to Valve Tech's broad client portfolio."

"Our valves business line is key to EnerMech's expansion plans in the Australian energy market and we are really pleased to be working with Chris



EnerMech managing director Doug Duguid (left) with Valve Tech managing director Chris Tabone.

Tabone and his team. The combined strengths of both businesses give us a very strong platform to become a major player in the valves supply, repair and overhaul market and there are many benefits for both parties."

Chris Tabone added: "The enlarged business, with its greater scale and resources, will provide our clients with innovative turnkey engineering services, solutions and equipment, which redefines valves services, supply and asset management within Australia."

The new entity, which will trade as EnerMech Valve Tech, expects to announce several major contract wins in the first quarter of 2013. The company will also roll out its EnerMech LIVE valve management system, giving clients full visibility of all its valve assets.

The EnerMech logo features a stylized blue and green swoosh above the company name "EnerMech" in a bold, sans-serif font. Below the name is the tagline "Safer • Smarter • Solutions" in a smaller font. To the right of the logo, the text "EnerMech Ltd" is displayed in a bold font, followed by the telephone number "Tel: 01224 723300" and the website address "www.enermech.com". The entire graphic is set against a light blue background with a thin white border.

New ABB app highlights potential compressed air energy savings

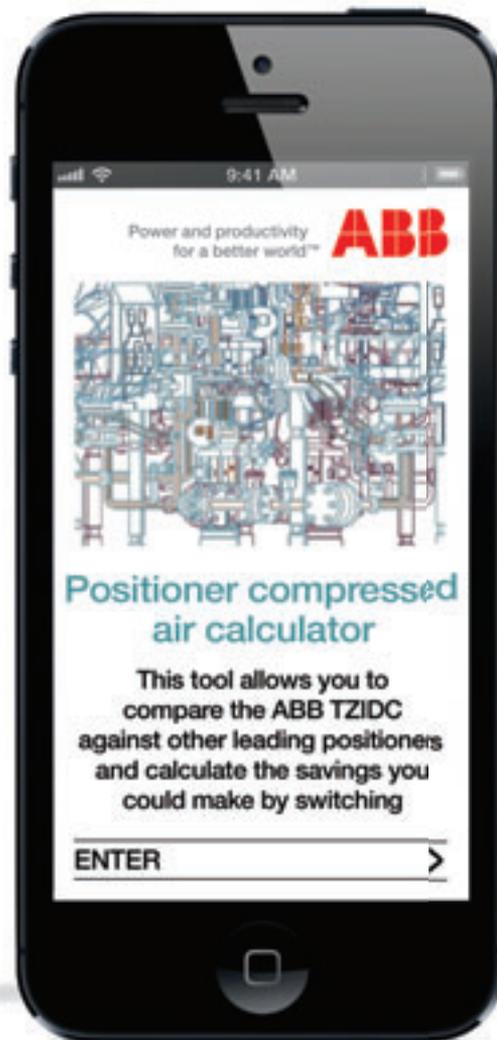
Users of pneumatic valve positioners can now assess the energy efficiency of their valve installations with ABB's new compressed air calculator app for the Apple iPhone and iPad.

Based on the amount of compressed air consumed by conventional positioners, the app shows how using the latest smart positioner technology can help operators to dramatically reduce their energy costs.

Easy-to-follow instructions show the user exactly what parameters are needed to calculate any potential savings. The user is prompted to enter the number of pneumatic positioners on site, air cost per standard cubic foot and the percentage of time spent at a steady state to calculate the user's current compressed air energy costs. These costs are then compared to the potential savings that could be achieved using ABB's TZID-C and EDP300 intelligent positioners, where compressed air is only consumed when required.

"At present there is no other app on the market that can show positioner users the significant energy savings that can be made by using smarter technology," says Jo Kirkbride, ABB's Product Manager UK & Ireland, Actuator & Positioning Products. *"Conventional valve positioners can typically consume compressed air even when not in operation, many sites could be racking up thousands of pounds in wasted energy."*

Consider a positioner which spends 50% of its operational time in a steady state position (steady set-point).





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Assuming a compressed air cost of 1p per scfm (standard cubic feet per minute), the cost of this wasted energy, in the worst case, can be as much as £2,106.78 per year. Replacing this positioner with a smart positioner could save between £500 and £1,200 per year per positioner through reduced compressed air consumption.

The app also allows you to measure savings in different currencies, including Sterling, Euros and US Dollars.

To find out more information call 0870 600 6122 or email moreinstrumentation@gb.abb.com, ref: 'Compressed air calculator app'. To download the ABB app, please visit the Apple App store and search for "ABB Compressed Air Calculator".



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By BVAA's Technical Consultant,
Peter Churm

**TECHNICAL
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Hot Spot 2013 systematic review

CEN have announced the 2013 systematic review of the following CEN/TC69 standards.

EN 558:2008+A1:2011 "Industrial valves - Face-to-face and centre-to-face dimensions of metal valves for use in flanged pipe systems - PN and Class designated valves"

EN 736-3:2008 "Valves - Terminology - Part 3: definition of terms"

EN 1074-6:2008 "Valves for water supply - Fitness for purpose requirements and appropriate verification tests - Part 6: hydrants"

EN 15389:2008 "Industrial valves - Performance characteristics of thermoplastic valves when used as construction products"

National Bodies must recommend either:

- Approval and continuation of the existing standard for a further 5 years or
- Revision of the standard or
- Removal if the standard.



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All-electric Rotork valve control package selected for offshore wind farm

Rotork is supplying an all-electric valve actuation package encompassing isolating, regulating and modulating actuators with two-wire digital control for the DanTysk offshore wind farm in the North Sea.

Almost one hundred Rotork quarter-turn electric actuators will control butterfly valves on the DanTysk transformer platform, situated 70 kilometres west of the German island of Sylt. The contract includes fitting the actuators to the valves, which has been performed prior to delivery at the specialist actuation workshop facilities attached to Rotork Holland, where the order was won.

Approximately half the actuators are IQTPro intelligent isolating and regulating duty units, the balance comprising CVA fully modulating control valve actuators. Both designs share advanced and user friendly non-intrusive programming and commissioning technologies, combined with comprehensive integral data logging, diagnostic and asset management capabilities. Rugged, double-sealed IP68 watertight and explosion-proof enclosures enhance long-term reliability in the harshest of environments, as can often be encountered in offshore applications.



Rotork CVA electric actuators deliver continuous, repeatable modulating control with a programmable fail to position option. Resolution, repeatability and hysteresis performance is quoted at less than 0.1% of full scale, offering suitability for the most demanding control valve applications.

Digital two-wire control is provided by Rotork's proprietary Pakscan P3 system, the third generation of a market-leading product, capable of monitoring and controlling up to 240 field units without repeaters on a single highway with a length of up to 20 kilometres. Designed specifically for the valve actuation environment, Pakscan incorporates secure field communications with inbuilt network redundancy to maintain control even in the event of equipment or cable failure. On the DanTysk project the Pakscan network master station will link the actuators to a distributed control system and to a remote, centralised monitoring centre situated at Esbjerg in Denmark.

The DanTysk offshore wind farm is a joint venture between Vattenfall and Stadtwerke München (SWM). On completion of the 1 billion project at the beginning

Some of the Rotork CVA actuators for the DanTysk project, fitted to butterfly valves and ready for despatch from Rotork Holland's actuation workshop facility.

of 2014, eighty wind turbines with a capacity of 288MW will supply electricity for up to 400,000 households. Rotork's involvement follows a similar North Sea offshore wind farm contract in 2011, also supplied by Rotork Holland, when IQTPro actuators were specified for the Borwin Alpha transformer platform, serving the BARD Offshore 1 wind farm.

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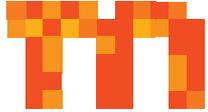
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New £2 million machining centre at KKI set to revolutionise valve manufacturing



Left to right: Takashi "Ike" Ikegaya, President and Founder of Nihon Koso and Denis Westcott, Managing Director of Koso Kent Introl

Koso Kent Introl (KKI), one of Yorkshire's leading engineering firms, has officially opened its new, hi-tech machining centre at one of its Brighouse factories, representing over £2 million of investment. The new facility, opened by Takashi "Ike" Ikegaya, President and Founder of Nihon Koso, is set to transform the company's valve manufacturing processes. It will result in increased manufacturing outputs, greater efficiencies and quality excellence for the global valve manufacturer.

The machining centre will speed up the way in which valves are manufactured at KKI. It combines turning, milling and drilling functions and accommodates much larger valves than some of the existing machines. Most importantly, it will allow for more efficient production techniques, enabling more flexible manpower planning and greater productivity.

Lynn Mowbray, KKI's operations director said: "Our machining centre opening is a significant milestone for KKI and forms part of our Continuous Improvement Programme to achieve world-class engineering and manufacturing practices for

our oil and gas customers across the world.

"The new pieces of machinery will make a huge difference to our operational capabilities, particularly for some of the high volume projects we have on our order books. It's absolutely vital to KKI that we keep all production in-house to maintain the highest quality standards and production integrity. These machines also offer a greater degree of flexibility and improved production scheduling."

Denis Westcott, KKI's managing director added: "We recognise that to remain competitive as a global player, we need to continue to invest in our people, processes, facilities and new machinery. This latest investment marks our intention to remain at the forefront of the bespoke topside and subsea valves market and keep manufacturing in Yorkshire where we've had our roots for over four decades."

The Machine Shop now accommodates several new machines. A new Dorries Scharmann Machining Centre has been installed. It took over 17 months to be produced in Ger-

many and a further two months to install. This machine will create a more efficient way of working on the shop floor, giving the team the ability to produce higher volumes in less time, with less waste. This new kit is in addition to the Mazak Integrex 200-4T that was installed last year, and is already proving its worth, reducing set-up and tooling time, and creating greater capacity and contingency.

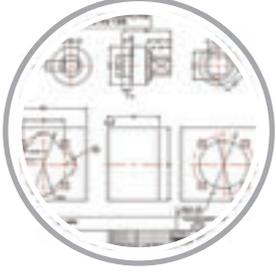
"KKI... to offer testing services to other manufacturers for the first time."

A state-of-the art submerged gas test facility, one of only a handful in the UK, is also now fully operational, enabling KKI to control cost, time and quality across the KKI product range. It enables the valve specialist to offer testing services to other manufacturers, for the first time.

Last year, KKI opened a third 18,000 square foot factory in Brighouse, a few hundred yards from its original factory on Armytage Road; part of a significant investment programme within Yorkshire. The new site houses the aftermarket team responsible for service and spares, and creates additional capacity for scheduled shutdown, maintenance or refurbishment programmes that demand high volume turnaround in short timescales.

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Rotork actuators on the Royal Navy's new aircraft carriers



Photograph by kind permission from BAE Systems.

Hundreds of Rotork electric actuators are being installed on the Royal Navy's giant new aircraft carriers HMS Queen Elizabeth and HMS Prince of Wales, both of which will be 920ft long and weigh in at 65,000 tonnes full displacement.

Each ship will be home to more than 1200 Rotork actuators, mostly operating ball and butterfly valves on duties encompassing sea water, fresh water, chilled water, fuel and fire-fighting systems.

The low maintenance demands of electric actuation made an important contribution to the contract award decision, as did Rotork's ability to satisfy all the specified requirements with commercially available off-the-shelf (COTS) products. Rotork's ability included the provision of Profibus two-wire digital network connectivity, combined with proprietary non-intrusive configuration and data transfer technologies and the availability of sophisticated valve diagnostic information, facilitated by integral actuator data loggers.

For duties that are important for the integrity of the vessels' hulls, Rotork is supplying IOTN direct drive quarter-turn actuators, which have been developed from a market-leading commercial industry design to specifically meet the demands of naval marine duties. The IOTN design has been independently tested for shock tolerance and its overall size has been reduced to lower its centre of gravity and account for shipboard space restraints.

IOTN actuator setting and configuration is performed non-intrusively using a hand held setting tool and

two-way wireless link. The integral data logger keeps a record of historical operating activity, including valve torque curves, which can be downloaded and analysed with Rotork software for maintenance planning or to identify and diagnose potential operating issues. The same software enables all set-up and configuration information to be reviewed, re-configured and then uploaded back into the actuator.

The majority of the remaining applications will be operated by Rotork ROMpak actuators, another specially developed design, introduced to provide the marine industry with a lightweight and compact solution for the operation of quarter-turn valves and dampers. All the Rotork actuator designs provide the option of local and remote control with a manual override.

For the provision of comprehensive control and feedback data about the valves, the actuators are equipped with the Rotork Profibus-DP card, which supports standard DP-V0 cyclic data exchange and DP-V1 acyclic data exchange for diagnosis, set-up and historical data.

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Growth Continues At 146 Year Old Business



Phase – Heaps' new side entry Trunion mounted ball valve

Heap & Partners are continuing with their ambitious growth plans. Managing Director David Millar commented that three quarters of the way through their year, they are 15% up on last year's record figures. Not bad for an old timer (the company, not David Millar).

Glyn Wordsworth – Boosting the control valve team

Heap & Partners have further boosted their control valve team with the addition of Glyn Wordsworth. Glyn joins Heaps from Samson control valves and brings with him 24 years' experience in the industry. Working with Ian Edwards, Glyn will be providing a special focus on the sales of Fisher control valves and ancillaries that are now stocked by Heaps.

Conoco Phillips Frame Agreement

Heap & Partners have just been awarded the Conoco Phillips 3 Year Frame Agreement. It covers Parker Hannifin, Parker Industrial and other Parker products and other High Pressure fittings used on their UK sites. The agreement covers

Aberdeen UKNS, Great Yarmouth UNSNS and Theddlethorpe Gas Terminal.

The agreement, which runs to 2015 and is open to extension, covers the supply of over 650 line items and also includes special items such as Nitrogen Generators and Valve assemblies. Peter Burnett said "We are very pleased to have the opportunity to work closely with Conoco on the delivery of this important agreement."

Apprenticeship Scheme Doubles In Size

Heaps have also boosted their apprenticeship scheme by taking on two more apprentices. With the success of their Phase Trunion mounted ball valves for the oil and gas market Heaps now need

more staff to be trained up. "It is vital that we continue to train up a supply of good apprentices to ensure we have the right calibre of staff for all our future needs." said David Millar.

The company believes one of the biggest risks facing society is 20% youth unemployment and one of the biggest risks facing engineering companies is lack of young engineers. For the second year running the company is increasing its total staff by 10%. The company understands the importance of investing in training. Over 15% of the whole workforce are currently attending a day release college course.

HOOTS – now on line

For a long time, Heap & Partners have talked about HOOTS, this year they have finally gone live. Heaps Online Order Tracking Service (HOOTS) is a quick and simple way for customers to keep track of their enquiries and orders on Heaps.



The new high pressure test rooms

The system will (if requested) email a customer when an item is dispatched. Customers can track orders on line, view and download all documentation (drawings, test certificates, etc.) and also access all quotes made by Heaps.

Andrew Will said "We found that 25% of all progress calls into our Sales office were for items that we had actually already delivered. This was a waste of time for our customers and for our sales staff. So we set about designing a simple online method to be more proactive with our clients." In reality the system is no more than a copy of the sort of thing you'd expect from on line shops like Amazon, but it's what online shoppers expect and Heaps believes it will become standard for every industry. For further information see their web site at www.heaps.co.uk

Phase – now on line

Phase – Heaps' new side entry Trunion mounted ball valve

Heap & Partners new side entry Trunion mounted ball valve, called Phase (an anagram of Heaps) is now selling well into the North Sea. To cope with the increased workload and demanding customers who expect only the best; new high pressure test rooms have been installed. In addition, when witness inspection is required, a new state of the

art remote monitoring and data logging system has been installed. This means customers can log onto a secure section of heaps.co.uk and view a live test on screen and monitor all of the test data as its logged. The aim is to help customers reduce their costs and carbon footprint.

3Ps on track

As has been previously reported in this magazine, Heaps ambitious 3Ps program is going well. Covering People, Planet and Profit it is now a major guiding force in the company. The aim is to use the increase in profits to give more back to society, boost staff moral and lower the cost base for the company. The volunteering element of the program has now started with a small teams heading out to carry out all sorts of work at the three charities chosen by the staff. From dismantling sheds, preparing for a children's Halloween party, chopping down trees, running fundraising events to carol concerts; the staff are starting to get very involved in their chosen charities.

The third P covers the planet and the company's stated aim to become the first company in the industry to become carbon neutral. At the end of August the company's carbon consultant delivered his Green Action Plan (GAP). The GAP has taken three months to produce and outlined 36 fully

costed ideas that if implemented would enable the company to achieve its goal. Set out in two stages it details the capital costs and bottom line savings the company could enjoy with each option. The first stage comprises a series of actions which are reasonably costed items whilst the second stage is for the future and looks at technologies that currently are in their infancy but one day may offer a viable solution - ideas such

contd on page 70...



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...contd from page 69



Glyn Wordsworth

as electric cars. Once the company has digested the report and started to implement the recommendations it will publish the report and let the readers of Valve User know of the progress and what savings have been made - both carbon and bottom line. David Millar commented "Some of the ideas are so easy to implement, are fully funded by the Carbon Trust and will make an immediate and significant bottom line impact that EVERY company should be doing them. Otherwise they are just throwing money away."

2013

The company has enjoyed a good 2012 and has further investment and growth plans in 2013, including a major expansion of its machine shop with new machines on order. David Millar said "the company is enjoying the renaissance in British manufacturing, and will continue to grow with it."



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Continuous Improvement at KKI: driving long-term benefits for customers and staff



The aftermarket team designed their workspace for maximum efficiency

Choke and control valve manufacturer Koso Kent Introl has come a long way since it was first founded back in 1967 by Ed Singleton. Ed has long since retired, but the philosophy for quality that he first established is as strong today as it ever was.

Overseeing this culture, with its focus on continuous improvement, is the responsibility of Tim Capewell, Improvement Manager at KKI. Since 2010, Tim has been dedicated to ensuring that people, process and systems are as efficient, effective and productive as they can possibly be, and that waste is minimised. The company is already operating to internationally-recognised quality standards (KKI has held ISO/TS 29001 since 2010; ISO 9001 since 1996; ISO 14001 since 1999; is SIL-3 Capable (certified by ABS Consulting); and has API Q1 accreditation), but recognises that there will always be room for improvement across its operations.

In his time on the continuous improvement programme, Tim has been focused on empowering the workforce. Identification of potential areas of improvement have

originated from staff members as have – crucially – ideas for determining and implementing solutions.

From the shop floor on all three manufacturing sites to the sales and engineering teams in head office, everyone has been involved in, and has benefited from the programme. And naturally, these benefits extend externally to customers; allowing greater throughput and an even more responsive and high quality service to be provided.

The findings of the programme have resulted in ongoing investment in manufacturing infrastructure, including a new machining centre, which was installed earlier in 2012. The new machines allow automation of processes, and the re-allocation of skilled workers to more productive tasks. And far from creating redundancies, the resulting effect has been the expansion of the workforce; in the last quarter of 2012 alone, 17 new appointments were made to support the company's growth plans.



MD of KKI, Denis Westcott and Mr Takashi "Ike" Ikegaya, President and Founder of Nihon Koso cut the ribbon on the new machining centre

The Aftermarket team in Factory 3 – best practice from the ground up

When the Aftermarket team were told that they would be moving to a new, 18,000 sq ft site in 2011, they realised that, with Tim's guidance, this would be the ideal opportunity to devise a highly efficient workspace (main photo).

With essentially a blank canvas on which to draw, the team, with a vision for the future expansion of the service, drew up their own plans for how work should flow around the site.

The result is a highly effective workspace, designed for expansion, and entirely fit for purpose both now and in the future.

Tim reports into KKI's MD, Denis Westcott who, along with the entire KKI Board, sees this programme as fundamental to KKI's ongoing success.

Tim's work, and the inputs from the workforce ensure that Kent Introl's reputation for quality continues to be upheld four decades after Ed Singleton first decided to set up the company.

As a footnote: Ed is still involved in the business in his retirement, occasionally acting in a consulting capacity.

Improving business systems for greater accuracy and efficiency

At the heart of every effective business are the systems that drive the workflow from the first customer enquiry onwards.

A review of systems has therefore been an integral part of the Kent Introl improvement programme. Leading the implementation phase of this aspect of the programme is Stuart Billingham, who is taking an 18-month secondment to preside over a multi-phase project that will see current systems (such as the company's estimation and sizing software) developed and new order processing systems introduced.

Furthermore, a collection of his white papers will be published in book form in 2013. It must be very satisfying to see that the groundwork for quality that he laid over four decades ago is still being built upon to this day.

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Metso's valves selected for several pulp and paper projects in Asia-Pacific region



During recent months, Metso has received various orders for automated process valves from several customers in the Asia-Pacific region. The automated valves of Metso have been selected for several mid-size projects where customers are rebuilding their processes in order to improve and maximize process performance, efficiency and safety.

with lower costs," says Esko Ilmonen, Vice President, Flow Control, Pulp & Paper Sales and Marketing, Metso Automation.

Majority of the valves for the projects will be delivered in the first quarter of 2013. The deliveries contain Metso's Neles® metal seated ball valves, V-port segment valves and triple eccentric Neldisc® butterfly valves for on-off and control applications. All valves are equipped with pneumatic cylinder actuators and intelligent positioners or limit switches. Material selection includes stainless steel, duplex stainless steel, SMO, Hastelloy and titanium. Deliveries also include high consistency segment valves fulfilling pulp and paper makers' specific needs.

Experienced in valves

Metso is the leading valve solutions and services provider. Metso's Flow Control solutions include control valves, automated on/off and emergency shut-down valves, as well as smart positioners and condition monitoring. Metso's world-leading product brands include Neles®, Jamesbury® and Mapag®.

Metso is expanding their installed base of valves by receiving repeat orders from loyal customers in the Asia-Pacific region.

Metso has been chosen as a partner based on the long-term relationship and

the unique local service provided to the customers. "We offer professional customer service starting from valve selection and the first sales contact up to the mill run-time support, and assist in all valve-related issues and even beyond that. Our excellent product portfolio matches perfectly pulp and paper mills' requirements and supports their targets to produce better quality



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By BVAA's Technical Consultant,
Peter Churm

**TECHNICAL
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Hot Spot 2013 Systematic review of steam traps Standards

The 2013 systematic review has been launched on the following European standards of CEN/TC 69 "Industrial valves"

EN 26553:1991 "Automatic steam traps – Marking" (exactly identical to ISO 6553:1980)

EN 26554:1991 "Flanged automatic steam traps - Face-to-face dimensions" (exactly identical to ISO 6554:1980)

EN 26704:1991 "Automatic steam traps – Classification" (exactly identical to ISO 6704:1982)

EN 26948:1991 "Automatic steam traps - Production and performance characteristic tests" (exactly identical to ISO 6948:1981)

EN 27841:1991 "Automatic steam traps -

Determination of steam loss - Test methods" (exactly identical to ISO 7841:1988)

EN 27842:1991 "Automatic steam traps - Determination of discharge capacity - Test methods" (exactly identical to ISO 7842:1988)

Voting is requested on the following options:

- Standard to continue unchanged in use for a further 5 years
- Standard requires revision
- Standard should be deleted

Any comments from BVAA members should be directed to BVAA for onward submission to BSI who will respond to CEN/TC 69 on behalf of UK.

Shipham launches new range of wafer check valves



6" Composite Wafer Check Valve

Shipham Valves, a subsidiary of Wärtsilä, has completed the development programme for a new range of composite single plate wafer check valves, which were introduced to the market place at the Valve World Exhibition held in Düsseldorf at the end of November.

Available in sizes from 3" – 12" / DN80 – DN300 and rated at 16 bar (230psi), the single plate Wafer Check Valve adds to Shipham Valves existing range of composite valves. The latest range is a compact, lightweight, fully non-metallic valve and comprises only two components - the body and the disc.

The materials used to manufacture Shipham's composite valves are thermo-setting glass reinforced epoxy resins (GRE). These materials offer outstanding internal and external corrosion resistance, will not melt, creep or shrink and have significant weight savings over equivalent metallic valves.

"The single plate wafer check valves are an exciting development for us and is a testimony to the skills and expertise of everyone involved with our product development programme," said Dave Bowen, Business Development Manager, Shipham Valves. *"This latest development maintains Shipham Valves position at the forefront of anti-corrosive valve technology."*

This latest addition to the composite valve range further enhances Shipham Valves' leadership in the manufacture of valves for corrosive applications and, following the acquisition by Wärtsilä Corporation in January 2012, the commitment to research and development has been further strengthened.

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Redefining Flow Control

EasiDrive Provides Safe, Economical Valve Operation

Valve actuation ideal for use in oil, gas and chemical processing industries



The Easi-Drive is ideal for use in the oil, gas and chemical industries

Smith Flow Control has ushered in an affordable way for companies to safely manage valve operations. The EasiDrive portable valve actuator securely and effectively operates valves in power plants, oil refineries, paper mills and chemical processing facilities. One operator can efficiently operate multiple valves with a single tool while reducing fatigue and injury risk. The tool is especially effective on valves that require a high number of turns or are otherwise difficult to operate because of high torque or where adverse climates (sub-zero, tropical, desert environments) make operations more challenging.

Mike Fynes, Sales and Marketing Director at Smith Flow Control comments: *"It is great that we have been able to manufacture a portable solution as an alternative to a dedicated valve actuator. Many of our customers are excited about the range as they can already see the benefits they will gain from using the EasiDrive system."*

Smith Flow Control's Singapore-based agent, Triple-Max Engineering Pte Ltd, has supplied hundreds of the EasiDrive Systems to large Petrochemical Refineries in the region to ease operation and improve efficiencies.

"Workers were straining themselves while operating the valves and we offered the EasiDrive System as a solution to their problem." Cynthia Xu, General Manager of Triple-Max Engineering Pte Ltd said. *"It is time consuming to open and close large valves that are not actuated. Two operators can*

spend almost 20 minutes working together to open just one 14" 1500# gear operated gate valve. By using the EasiDrive system, the time taken to operate each valve is reduced to approximately 5 minutes with just one operator, making it almost effortless."

EasiDrive is a lightweight, portable and adaptable pneumatic tool. The tool's custom engineered reaction device protects the user from the "kick" normally associated with other torque tools, eliminating the possibility of any injury associated with its operation.

EasiDrive also features a variable output torque, controlled by a choice of limited pre-set Filter Regulator (FRL) packs, which prevents excessive torque being applied and ensures proper and safe operation of the valve.



Smith Flow Control
Tel: +44 (0)1376 517901
www.smithflowcontrol.com

Valveforce win the balloon race

Valves from steam system and flow control specialists Valveforce are playing a key part in the success of a new balloon dipping plant supplied to China by Greenbrook Automations.

Valveforce's Thermal Oil Three-way Pneumatic Control Valves are proving robust and reliable at the plant, which was designed and built by Greenbrook, the UK's most experienced dipping plant business.

Chesterfield-based Greenbrook, who also produce ancillary equipment for the world latex, nitrile and PVC industries, called in Valveforce to bring about the most efficient and cost-effective solution for heating hot oil, whilst maintaining a high level of product quality.

Robin Gronbach, Director at Greenbrook Automations and sister company Talking Balloons, said: "Valveforce's control valves are proving an excellent choice. From the very outset, the whole experience with Valveforce has been first-class, including delivery times that were far in advance of anything else we were offered. We have benefitted in both



Top right: Balloon dipping Above: Valveforce installation at Greenbrook

price and delivery from their independent status, as well as their ability to quickly understand what we were trying to achieve with our application".

In addition to thermal oil, Valveforce's pneumatic control valves are designed to handle a wide range of fluids such as steam, water, nitrogen and natural gases. The range benefits from optimised modular construction for repair.



Valveforce

Tel: + 44(0)121 7111 908

www.valveforce.co.uk

Metso's reliable valve and field instrument solutions to sustain performance of renewable gas production in GoBiGas, Sweden

High efficiency of the production and operational reliability are the key performance indicators for an innovative plant that will be equipped with Metso's valve and field instrument solutions.

Metso has received an order to supply valves and smart instrumentation for the innovative GoBiGas project in the Rya harbor, Gothenburg, Sweden. GoBiGas is a major project for Göteborg Energi AB that is starting a biomass gasification plant. The plant is currently being built by Metso Power and is the first of its kind in the world. The plant converts biomass into renewable biomethane gas, using the existing natural gas grid for distribution.

Metso has been selected to supply the state-of-the-art control and on-off valves together with intelligent and safety valve controllers for both the Gasification and the Methanation part of the GoBiGas project, phase one, to help the plant maximize process reliability at all times. The Metso offer was selected in a procedure following the Public Procurement Act, fulfilling all the technical and environmental requirements accordingly.

Reliable valve performance in demanding conditions is the key to ensuring safety, flow control accuracy, and reliability together with reduced process variability, which are key challenges in the gasification process. With the intelligent valve controllers featuring performance diagnostics and the safety valve controllers providing extensive safety valve testing and improved diagnostics data, predictive maintenance is possible, thus resulting in improved plant safety and minimizing the operational and maintenance costs of the valves.

Metso's field solution delivery consists of a total of around 320 valves, including Finetrol eccentric rotary plug control valve, Butterfly valves, Neles RotaryGlobe valves, Segment and Ball valves, 145 intelligent controllers Neles ND9100 and about 60 new generation safety valve controllers Neles ValvGuard™ VG9000.

GoBiGas focuses on producing biomethane through gasification of biofuels and forest residues. The gasification system, together with the subsequent methanation and gas up-grading system, will produce high-calorific gas, biomethane, for distribution in the existing gas grid. This is the first plant of that kind ever and gas of this quality has never been produced continuously before from gasification.

The GoBiGas gasification plant will be built in two phases, the first being scheduled to be operational late 2013, and the second phase to be accomplished after the first phase has been evaluated.



Metso's Finetrol eccentric rotary plug control valve

Unique offering for the renewable energy industry

Metso has a unique and full range offering for control and on-off valves, actuators, intelligent controllers and field instruments for the renewable fuels industry. In Finland, there are examples of major refinery applications of Neles control and on-off valves. Jamesbury and Neles products are ideally suited to bioethanol production, which has led to their use in over 60 such plants, for instance in the USA.

Metso is the leading valve solutions and services provider whose Flow Control solutions include control valves, automated on/off and emergency shut-down valves, as well as smart positioners and condition monitoring. Metso's world-leading brands include Neles, Jamesbury and Mapag.

Due to Metso's strong position in advanced valves technology, services are a major part of the offering. For valve customers, Metso already has 32 service centers around the globe, all located close to our customers to offer service and support. The newest supply and service was opened in India earlier this year.



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SIPOS actuators' pioneering approach to presentation

The time delay between introducing a new product series and updating documentation has been addressed at SIPOS Aktorik. Parts inevitably have to be produced before they can be photographed. A rapid solution initiated by the company's documentation team eliminates any delay producing illustrations. SIPOS 5 images are now produced directly from digital design data provided by the company's product development departments. As a result, photographs are created at the same time as the production of new products or parts.

SIPOS recognises that a picture 'paints a thousand words' and illustrations are highly effective in conveying important information across cultures. As a result, the company's documentation includes a large number of graphics and photos. To ensure images are detailed, impactful and accurate, SIPOS has a talented in-house creative design team investing considerable time and resource in the creation of photographs and illustrations.

Commenting on the new approach to illustrating actuation technology, Peter Mach from SIPOS' documentation and advertising department:

"We like to be pioneering, both in our product developments and our approach to supporting materials. This design breakthrough ensures that we provide up-to-the minute information."



A digital design initiative from SIPOS Aktorik provides immediate illustrations.

"At SIPOS we look to incorporate latest technologies across all our activities – our focus is on future-proofing our actuators and services."

The design initiative from SIPOS enables the company to very quickly depict new products and provide illustrations that are impressive in their detail and show a number of different perspectives.

SIPOS Aktorik – the manufacturer and global supplier of specialist and standard electric actuators.

SIPOS Aktorik
www.sipos.de



Parker's 'Mill' cylinders deliver high performance under harsh conditions

Parker Hannifin's 160 bar and 250 bar hydraulic 'mill' cylinders are an established global favourite in hostile environments and arduous applications. Originally designed for use in steel mills, Parker's mill cylinders are of heavy duty, all-steel construction and are fatigue-free at their maximum rated pressure. New for 2012, the latest generation of these cylinders extends the standard fitment of induction hardened piston rods, offering the ultimate resistance to damage in tough applications. A new, wider range of mounting accessories offers greater versatility for the designer, while web-based CAD models and an on-line configurator speed and simplify the selection process.

Parker's standard mill cylinders are available in two ranges. The MMA series is rated at 250 bar working pressure and conforms to ISO 6022 and DIN 24 333, while the MMB series of 160 bar cylinders conforms to ISO 6020/1. Both MMA and MMB series cylinders incorporate features such as removable glands and separate bodies with detachable heads and caps to ensure ease of maintenance and low whole-life operating costs. Steel and aluminium mills, paper mills and plastic injection moulding machines are just some of the applications where Parker mill cylinders have earned their reputation for rugged high performance.

Both the MMA and MMB series are available with a range of gland and piston seal options to suit differing application demands. Each offers different combinations of attributes, allowing the designer to select the best possible blend of load holding, contamination resistance, fine positioning control and seal life to suit the application.

The seals fitted as standard to mill cylinders provide excellent low speed and break-out performance and deliver exceptional working life in high cycle applications. The detachable, corrosion-resistant steel gland houses a heavy duty wiper seal, polyurethane lipseal and bearing rings with, additionally, a PTFE stepped seal on the 250 bar MMA series cylinder. On both MMA and MMB series, the piston carries a heavy duty filled polymer seal with broad bearing rings, preventing metal-to-metal contact and helping to protect the piston seal from contaminants.

For the most arduous conditions, where long life and durability are critical, traditional chevron piston and gland seals are a popular choice. Secured by a corrosion resistant gland retainer, the chevron packing set and bearing rings are protected by a heavy duty wiperseal, while the two-piece piston features a wide bearing ring mounted between chevron seals, for high resistance to side loads.

Where load-holding performance is critical, the load holding option combines the all-round performance of the standard gland assembly with the resistance to cross-piston leakage of the chevron piston, giving an optimised combination of wear resistance, seal friction and load holding properties.

A low friction gland with stepped seals is offered for applications where very low friction and an absence of



stick-slip are important. The matching piston employs PTFE seals and wear rings, chosen for their low friction performance and high resistance to wear. Low friction seals are offered as a standard option for the MMA series and are available to special order for the MMB range.

Parker's mill cylinders are available in a wide range of bore sizes up to 320mm diameter and in stroke lengths up to 5 metres. Standard features include precision ground, hard chrome plated and polished piston rods, which are induction hardened as standard on bore sizes up to 200mm diameter. Detachable threaded flanges for head and cap retention simplify maintenance, while heavy wall steel tubing honed to a high surface finish ensures a long seal life. Optional features include adjustable cushions at both ends for shock suppression and high speed cycling performance, air bleeds, gland drains and special modifications for water service. Where precise control over performance and positioning is required, feedback devices and non-contacting position switches can be specified.

Mill cylinders can be used at operating temperatures of between -20°C and +150°C and generate up to a massive 2000kN, making them the ideal choice for high force applications in the toughest conditions.

For more information, visit the company's web site at www.parker.com



Parker Hannifin
Tel: 0800 27 27 5374
www.parker.com

How do you keep up with valve industry developments?



We all have difficulty getting out sometimes.

Time is a precious resource after all. But if you're a significant user or buyer of valves and actuators, you really do need to keep up with new technology and product developments, and keep an eye out for new suppliers.

BVAA has the Answer! **We bring the exhibition to you!**

For many years the BVAA has been organising 'desktop exhibitions' for major users, inside their own premises.

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Solve your supply chain issues over lunch

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"We have had very positive feedback from exhibition attendees. We are already looking forward to doing it all over again"

- Dave Anderson, Score.

Previous hosts include:-
Ministry of Defence, Foster Wheeler, AMEC, MW Kellogg, Stone & Webster, Snamprogetti, British Energy, Score, Aker Kvaerner, KBR, Parsons...



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www.bvaa.org.uk/exhibitions.asp

Type K passes the speed test for power plant damper operation



An obsolete ID fan inlet damper drive in need of replacement on Unit 1 at the Florida Power & Light Manatee Station

The swift performance capability of the Rotork Type K vane type damper drive has provided the successful retrofit solution to a critical application involving the safe and efficient operation of balanced-draft power generation boilers.

Inlet draft (ID) fan inlet dampers at power stations regulate the fan-induced pressure and airflow supply to balanced-draft power generation boilers. These boilers require a consistent internal operating pressure for efficient and safe combustion. Boiler pressure fluctuations create combustion problems that can, in extreme conditions, lead to catastrophic failure and structural damage. The maintenance of consistent operating pressure relies entirely on the swift operation of the ID fan inlet dampers.

At the three-unit 2735MW Florida Power & Light Manatee Power Station at Parrish, Florida, the ID fan inlet dampers demand full 90 degree damper movement at full torque load in three seconds or less in order to safeguard the operation of the boilers.

In a recent outage at the station it was necessary to replace the ID fan inlet damper drives on Units 1 and 2, which were over thirty years old and incompatible with the HART protocol of the station's new Distributed Control System. In addition the manual overrides on the drives had proved to be unreliable.

The equipment selected to replace the obsolete equipment was Type K 'PM Series' pedestal mounted TK-6 damper drives, delivering a torque of 5000 lbs-ft at a tested time of less than three seconds for a full

90 degree stroke. Operated by vane-type direct drive pneumatic actuators, these units offer a smoother and faster acting performance than any alternative design.

Type K provided a 'drop-in-place' retrofit installation, matching the dimensions of the existing damper drive footprint on all eight of the replacement installations in Units 1 and 2. Integrated air volume boosters were fitted to obtain the required rotation speed and the control interface was provided by smart positioners.

Prior to delivery, Type K completed factory acceptance testing on the drives and obtained the test cycle times as recorded by the smart positioners. Test results were video recorded and documented for Florida Power & Light to review.

Installation was followed by witnessed acceptance testing during which the drives performed as quickly and smoothly at full load as the factory testing had indicated, contributing to a punctual return to boiler readiness for electricity generation.

Following the retrofit at Manatee Station Units 1 and 2, Type K has supplied four identical damper drives to the Florida Power & Light Martin Station on the east coast of Florida. The four remaining drives on Unit 3 at Manatee are programmed for replacement in 2013.



The Type K damper drive 'drop-in-place' replacement, matching the footprint of the old equipment. Note that the handwheel has been re-engineered in the vertical position to facilitate access to the hinged man-way door behind the unit, which provides access to the ID fan for servicing.

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Tyco Valves & Controls Adopts New Pentair Name



Tyco Valves & Controls, the leading global manufacturer of valves, actuators and controls announces that it is now called Pentair Valves & Controls.

Now part of Pentair Ltd., Pentair Valves & Controls will continue to deliver superior flow management products, services and solutions to customers around the world. Benefiting from Pentair's enhanced global reach, the company's broad product portfolio of valves, actuators and controls will be brought to a wider range of applications and industries than ever before, including oil and gas, power, mining, chemical, food and beverage and building and construction.

Through a portfolio of over 60 trusted brands, Pentair Valves & Controls brings vital infrastructure to communities around the world, using local knowledge combined with the support of a global network. Partnering with customers, the company offers solutions to real market challenges, keeping operations running safely, minimising downtime and enhancing lifecycle performance.

David Dunbar, president, Pentair Valves & Controls (pictured above right), comments, "Joining together

two great companies, Tyco Flow Control with Pentair Ltd., is the start of a bright future, not just for our business, but also for our customers. We're dedicated to continuing to offer the very best products, technical expertise and service to deliver total solutions to our customers around the world, whatever the application."

Randy Hogan, chief executive officer, Pentair, adds, "It is our shared ethos to develop new solutions to contribute to healthier, safer environments for our changing world, and solve a variety of industrial needs. All that has changed is the name: we will still deliver the same market-leading products and services as before, remaining focused on our customers' needs and maintaining our position as the world's leading supplier of flow control solutions."



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SMCI to Join Metaltek International



Meighs Castings, part of Metaltek, are based in Stoke-on-Trent, UK

MetalTek International, a manufacturer and integrator of quality high alloy components with operations in Wisconsin, Missouri, Ohio, South Carolina, Tennessee and the UK, recently announced the acquisition of Florida based Specialty Maintenance and Construction, Inc., better known as SMCI. SMCI is a premier provider of close tolerance fabricating and machining services targeting high performance markets including energy. The addition of SMCI's capabilities further advances MetalTek's growth strategy as a key comprehensive provider of metals technology in targeted global markets.

"We are very excited to be able to continue to offer our customers the expanded capabilities of a worldclass metals technology company," said MetalTek CEO Robert Smickley. "The breadth and depth of MetalTek's product and service package is further enhanced by the considerable offerings of our new partner SMCI. We know of no other company anywhere that can provide customers in our markets the range of high quality products from various metalworking technologies that they can get from MetalTek."

Kevin Hissem, Vice President and General Manager of SMCI, added, *"Joining with MetalTek provides SMCI with a unique opportunity to grow in those markets where we truly have something special to offer. Our target markets, business philosophies and culture, and commitment*

to providing exceptional products and services to our customers are really aligned with MetalTek's. The technical expertise along with the sales and marketing horsepower of our combined companies will give our customers even more capabilities to pick from."

"The addition of SMCI to our newly formed Energy Group puts us in a very strong position to be the 'goto guys' for almost anything metal in our targeted key environmental and energy markets," said Smickley. "We will continue to do whatever it takes to help our customers access the alloy materials and process technology that they need to be successful in their markets."

Based in Lakeland, FL, SMCI has been a close tolerance metal fabrication and machining firm serving high end markets since 1977. MetalTek International is a privately held metals technology company headquartered in Waukesha, Wisconsin. The company employs more than 1,400 people in ten facilities in the U.S., England and Scotland.

For more information, visit www.MetalTek.com



Meighs Castings / MetalTek International

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www.quickits-online.co.uk



New Recruits Support AUMA UK's Service Remit

AUMA growth in the UK has been supported with the recruitment of Kerry Harris to the new post of Manager for the Southern Region and Head of Internal Sales. The appointment supports the manufacturer and global supplier of electric actuators' focus on customer service. Process control applications supported by AUMA include the water, power and petrochem industries.

Immediately prior to joining AUMA, Kerry Harris worked as UK Sales Manager for an electronics organisation specialising in air conditioning and energy solutions. Other senior positions held over twenty years have provided Kerry with widespread expertise across customer account management,

sales and business development management roles.

Other recent recruitments at AUMA UK include Mark Furlong who joins the company's field team as a technical sales representative for the North West of England. Mark, who has a track record of over 25 years in the actuation industry, moves from an established UK valve distributor where he also managed the NW territory.

Expansion in the UK reflects global growth for the AUMA group which has manufacturing headquarters



Kerry Harris is recruited to the new post of Southern Region Manager and Head of Internal Sales for AUMA UK. He is one of two recent appointments.

in Muellheim, Germany. AUMA is represented in 35 countries and employs over 2,000 people worldwide. AUMA UK forms part of the global AUMA organisation.

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*By BVAA's Technical Consultant,
Peter Churm*

**TECHNICAL
HOT SPOT**

Hot Spot ISO/FDIS 10631

ISO 10631 "Metallic butterfly valves for general purposes"

This International Standard has been modified according to the accepted DIS comments and has been submitted to ISO for launching Final Draft International Standard (FDIS) vote. It specifies requirements for the design, materials, (e.g. steel, cast iron, ductile iron, copper alloy), pressure-temperature ratings and testing of butterfly valves having metallic bodies for use in general purposes flanged or butt welding piping systems and used for general purposes.

This standard covers butterfly valves of the following nominal sizes, DN and NPS:

DN 40; 50; 65; 80; 100; 125; 150; 200; 250; 300;

350; 400; 450; 500 (550); 600 (650); 700; 750; 800; 900; 1 000; 1 200; 1 400; 1 600; 1 800; 2 000, 2 200, 2 400.

NPS 1 ½; 2; 2 ½; 3; 4; 5; 6; 8; 10; 12; 14; 16; 18; 20; (22); 24; (26); 28; 30; 32; 36; 40; 48; 56; 64; 72; 80, 88, 96.

It is applicable to butterfly valves of the following nominal pressure designations, PN and Class:

PN 2,5; 6; 10; 16; 25; 40.

Class 125; Class 150; Class 300.

When published this standard will replace ISO 10631:1994 "Metallic butterfly valves for general purposes"



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Roel Van Doren Appointed President, Emerson Process Management, Europe

Emerson Process Management announces the appointment of Roel Van Doren as President, Europe. In his new role, Van Doren will be responsible for leading all European sales and marketing activities. He takes over from Bob Sharp, who is moving to a new position at Emerson, in St. Louis, USA. Van Doren will continue to be based at Emerson's European head office in Baar, Switzerland, where he previously held the position of Vice President, Northern Europe.

"I am delighted to announce the appointment of Roel to this key position," said Steve Sonnenberg, President, Emerson Process Management. *"Europe is a significant part of the Emerson*

Roel Van Doren, President, Emerson Process Management, Europe

Process Management business and our continuing investment in the region demonstrates our commitment

to providing the highest level of service and support to our customers."

"This is an exciting time for Emerson in Europe as we are growing our network of regional service and support centres and expanding our manufacturing operations," said Van Doren. *"My aim will be to support our stated objective to make Emerson a Trusted Advisor, providing technology that is easy to install and use, and people that are responsive to our customers' requirements."*

Van Doren has been with Emerson for 22 years, progressing through the organisation in various management roles. After ten years with the Belgian organisation, Van Doren moved to the UK in September 2000 and became the General Manager Operations for the UK and Ireland. Subsequently he took an assignment in the US as Vice President of the Refining and Chemical Industry Center.



EMERSON
Process Management

Emerson Process Management

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www.Emerson.com



By BVAA's Technical Consultant,
Peter Churm

**TECHNICAL
HOT SPOT**

Hot Spot PD 5500:2012 +A1:2012

PD 5500:2012+A1:2012 "Specification for unfired fusion welded pressure vessels" supersedes PD 5500:2009 which is now withdrawn.

This edition outlines the latest amendments to the specification and enquiry cases up to and including those published in September 2012. It advises on the design and assessment of pressure vessels and can be used to support systems built to BS 5500 or PD 5500.

Key amendments for 2012:

- Inclusion of Enquiry Case 5500/127 on wind loading of a procedure based on the methods given in BS EN 1991-1-4 +A1 2010 for calculating wind loads.
- Classification of the specific requirements for

vessels made from aluminium with all requirements for aluminium now appearing in the aluminium supplement.

- Updates of various internal and external references and revisions to Enquiry Case 5500/134 on superseded referenced standards.
- Corrections based on the committee's consideration of contributions made by committee members and comments by users, including updates to the Foreword, Annex W12, the copper supplement and various other clauses throughout the code.

For further information visit shop.bsigroup.com/USpd5500 or contact Customer Services quoting market reference code USpd5500. BSI Tele: +44 20 8996 9001

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We all have difficulty getting out sometimes.

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www.bvaa.org.uk/exhibitions.asp

Valves switch up to 4 times faster

Pneumatic volume booster for set point signal from positioner to actuator

Pneumatic positioners match the particular current valve setting with the set point signal as a control value. The control air, as the input quantity, generally corresponds to a unit signal of 0.2 to 1 bar. Positioners are also volume boosters which convert the control air at a minimal pressure to a proportional, high control pressure for the positioning of the valve. However, control valves with large volume, pneumatically-operated, part-turn and piston actuators usually need several seconds for large positioning processes or to close or open fully. Concerning valves from DN 150 upwards or with actuator volumes > 14 dm², this results in restrictions in control quality. Now, with the newly developed, high precision 4090 pneumatic volume booster from Schubert & Salzer Control Systems, it is possible to amplify the air strength of the set point signal from positioner to actuator such that these control valves – depending on nominal valve size – operate up to 4 times faster without any further modification.

The pneumatic volume booster is based on a diaphragm system with which the pressure and volumetric flow of the control air are increased up to 6 bar through the controlled insertion of supply air. In the volume booster, the control air is fed through an adjustable bypass to the actuator. By controlling the flow rate in the bypass, the switching threshold for activating the amplifying air can be controlled precisely. This ensures that the pneumatic volume booster applies the default amount of supply air to the actuator with small changes in pressure, i.e. small control interventions. When the adjustable bypass pressure threshold is exceeded, the



Figure 2
The 4090 pneumatic volume booster for amplifying the supply air of the set point signal from positioner to actuator is connected directly to linear or part-turn actuators.

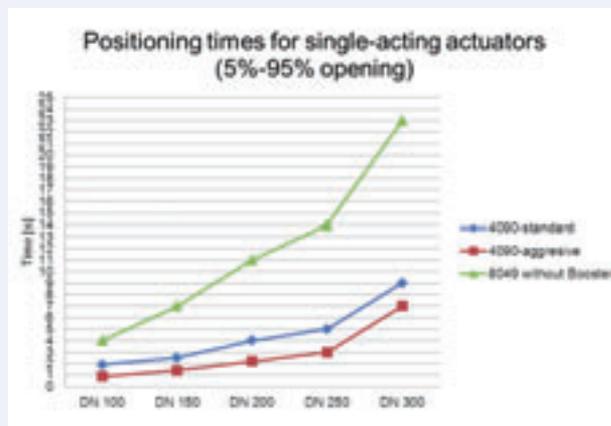


Figure 1
The 4090 pneumatic volume booster minimises opening and closing times of pneumatically actuated control valves. The example shows a comparison of the opening times – without amplifier, with standard and “aggressive” amplification of the set point signal – for a single-acting actuator of ball sector valves of different nominal sizes.

pneumatic volume booster is activated and releases the additional pressure amplification for the control air so that the adjustment of the valve stroke or, respectively, the part-turn actuator is substantially faster.

In the venting also of the actuator, the pneumatic volume booster adopts the same function and makes a vent valve operate when the supply air pressure is reduced. An exhaust air filter fitted here minimises sound emission.

The 4090 pneumatic volume booster enables significant reductions in switching times (Fig. 1) both in the closing as well as the opening of a valve. Using a DN 300 ball sector valve for a direct comparison, the closing time for a single-acting actuator falls from 43 seconds to 21.5 seconds with a standard setting and to just 10 seconds with an “aggressive” bypass setting on the booster. This new pneumatic volume booster not only shortens switching times significantly but also optimises the control quality particularly for control valves in the larger nominal sizes.

The volume booster (Fig. 2) can also be connected retroactively with ease to G 1/4" in-line linear actuators and to part-turn actuators with a Namur (1/4") interface.



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Smart Valve Monitoring delivers networked solution for increased partial stroke test functionality



The Rotork SVM field unit is incorporated on the valve actuator control panel for hazardous area applications.

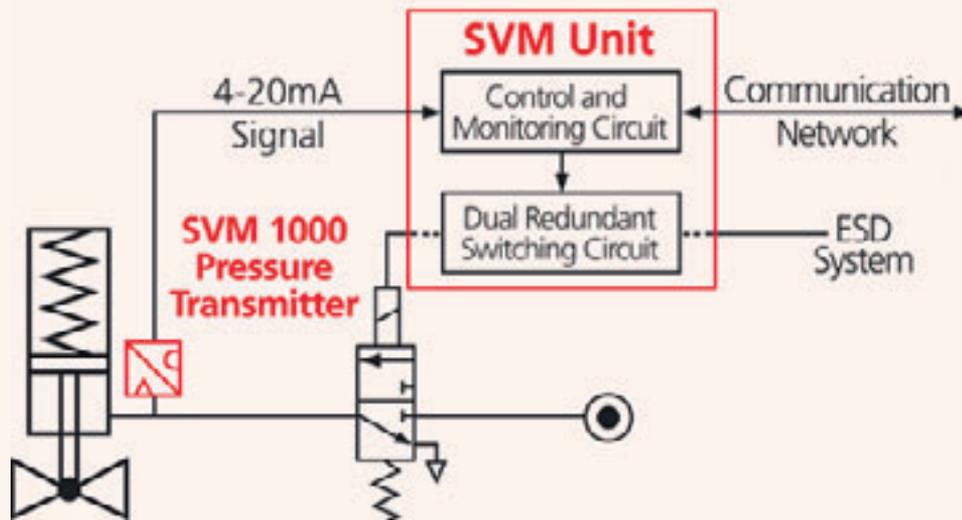
The Rotork SVM (Smart Valve Monitoring) system has been selected to provide a networked solution for digital valve monitoring and partial stroke testing on a large scale oilfield installation in the Middle East. The system is designed to deliver predictive maintenance information from widely distributed areas for use by the operators to reduce shutdowns and improve overall plant efficiency.

This is made possible by the ability of the SVM to be integrated into an existing Ethernet and fibre optic infrastructure, enabling over one hundred monitored valve actuators on wellheads at numerous locations to be networked over distances of ten kilometres or more.

The SVM field control units on this project are attached to the ESD circuits for shut off valves installed in sets of two and four on more than fifty wellheads. Analysis is performed on the SVM server computer in the centralised control room. Communication between the wellhead sites and the computer is fully integrated within the operator's existing network infrastructure. The SVM field units are incorporated into the Ethernet network that links other equipment and instrumentation at each wellhead site. A fibre optic link is then used to transmit the data to intermediate engineering and control stations at two manifold sites. From these sites, fibre optic links are again used to transmit data from all the wellheads to the centralised control room.

Partial stroke testing (PST) is a function used in a safety instrumented system (SIS) to enable the operator to identify possible failure modes on a shutdown or emergency shutdown (ESD) valve without the need to completely close the valve and hence disrupt the process. Partial stroke testing is an accepted hydrocarbon industry standard technique that is quantified in detail by regulatory bodies such as the IEC and ISA.

The partial valve stroke prevents unexpected failure on demand of the safety function and demonstrates that certain potential problems that would otherwise go undetected, such as spring fractures in the spring chamber of the pneumatic actuator, are not present. Consequently, the interval for testing for these otherwise undetected errors can be extended.



Typical Rotork SVM installation schematic

The Rotork Smart Valve Monitor incorporates several features that are not available from other systems, as well as providing detailed diagnostic data that allows the operator to plan for strategic preventative maintenance. The key to the SVM's reliable performance is its separation from the valve's control system. This enables the operator to design the control system exactly to suit the routine and safety requirements without having to compromise for the testing programme.

The SVM system is powered by the control signal to the actuator's solenoid valve. The monitoring function is then provided by a pressure transmitter located between the solenoid valve and actuator which records the instrument pressure changes whilst the valve is moving. Any change in the valve performance is detected and identified by a change in the pressure wave exiting the actuator. The simple, self-contained design of the SVM enables it to be used with the most complex control mechanisms and makes it impossible for the SVM to prevent the valve from closing on demand.

Analysis of the 4-20mA signal from the pressure transmitter during the partial stroke test is performed using SVM software to confirm the correct functioning of the valve or identify a fault. To achieve this, the output pressure curve of the transmitter is compared with the pressure signature of the actuator, obtained during commissioning. Identified faults can include valve obstructed, damaged actuator cylinder, seized valve or failsafe spring failure, stem shear or disconnected valve, stiff valve, increased breakout

torque, damaged valve seat, internal cylinder corrosion, exhaust restriction and sticking solenoid valve. The SVM always tests every final element component of the shutdown system and is therefore capable of detecting all the failure modes of the valve, actuator and controls that are possible during a partial stroke test. It is designed to ensure that operators obtain the maximum safety performance from their systems whilst running their plants at maximum efficiency.

The benefits of using the SVM are therefore not limited to simply reducing the probability of valve failure on demand. Gains can also be made in the capital cost and the production performance of a plant. For example, the requirement for costly redundant valves can be reduced or eliminated. Production performance can be enhanced by extending the periods between compulsory plant shutdowns and predicting potential valve failures, enabling the pre-ordering of spare parts and identification of maintenance priorities.

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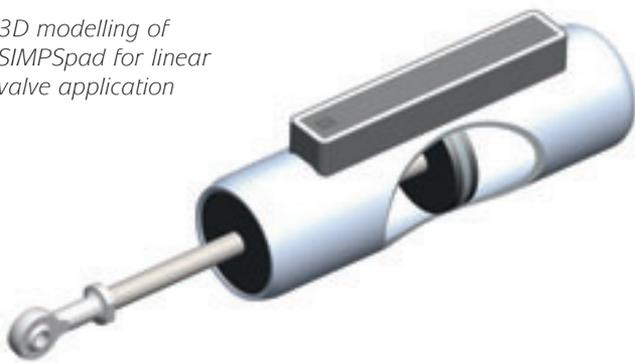
TT Electronics - High Performance Technology for Valve Position Sensing

Few would doubt that the global automotive industry is one of the most demanding markets for components. High standards of performance and reliability are expected in extremes of heat and cold, vibration and EM interference. No wonder then that technologies proven in such conditions should find application in a variety of other sectors, and valve design is a great example.

Autopad®

Take Autopad® for instance. This position sensing system is used for linear and rotation sensing in a wide range of automotive applications - in over five million applications each year - and the same benefits can be enjoyed in modern valve design. The system can measure absolute or relative position with high resolution and accuracy. As each system is designed for the particular application, virtually any size or shape of valve can work with it, and in many cases it can be retro-fitted. Linear designs with travel of over 700mm have been created to date.

3D modelling of SIMPSpad for linear valve application

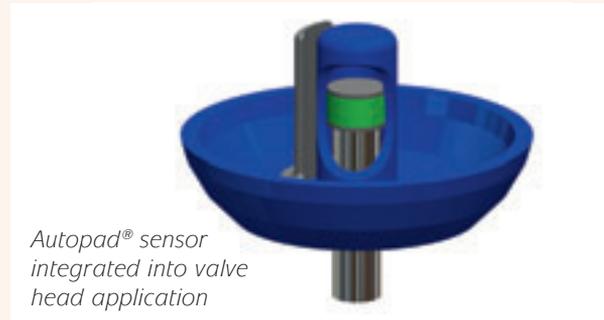


The particular features of Autopad® stem from its contactless inductive design that uses no magnets. This gives excellent immunity to EM interference and can operate through oil, water and plastic, vital for valves used in many process industries for example. It also ensures that the sensor is tolerant to vibration and offsets. The Autopad® design consists of two parts: a pad which is a specially built pcb incorporating transmitting coils, and a 'target' puck that typically connects to the moving part of the valve. These two components move relative to each other to create an output signal according to the puck position. The signal has 12-bit resolution, an accuracy of better than 1% and zero hysteresis. A digital signal can also be generated in different formats for interfacing with other equipment.

“Demand is now clear from valve manufacturers...”

Valve head

Demand is now clear from valve manufacturers who are finding that Autopad® is ideally suited to applications in water transport and distribution, dairy farming and many manufacturing and process industries. The systems can provide high performance at a significantly lower cost than current sensor systems. Peace of mind is assured from the field-proven design in even critical applications. Temperature range specified is -40 to 150 degreesC operation.



Autopad® sensor integrated into valve head application

SIMPSPad

Building on the ASIC developed for Autopad®, a new contactless technology platform has been developed: SIMPSPad offers the ability to sense even through non-ferromagnetic metals as well as water, oil and plastics. In situations where the sensor unit is surrounded by metal or attached to a metal casing, SIMPSPad can produce accurate, reliable position sensing where other systems would struggle at best.

SIMPSPad also features greater pad / puck separation: 5-15mm is easily achievable, and has a high tolerance to changes in this spacing, for example as a result of vibration or in less rigid installations.

As with Autopad®, the movement of a puck near to a pcb incorporating both transmitter and receiver coils produces the required signal. In the case of SIMPSPad however, a layer of high permeability soft magnetic material is incorporated into the static pad, and so the sensor operates in magneto-inductive rather than purely inductive mode. The sensor can be simple and highly robust, ensuring extreme reliability.

Linear and curvi-linear designs are possible, and in valve applications a magnet is attached to the moving assembly, while the static sensor is located on the outer part of the valve assembly. With suitably sealed electronics, SIMPSPad can even be operated fully immersed. And unlike most other sensing systems, very long travel distances are possible, limited only by the length of the pcb.

Since only the position of the magnetic puck is important, and not the strength of the magnet itself, good electromagnetic immunity is achieved. Control of hysteresis is important in valve applications and SIMPSPad operates with typically 0.2% hysteresis over its entire length. Analogue and digital outputs (PWM, PAS, LIN etc.) are possible, with two or three-wire connections to automotive specifications.

Valve applications in long-travel situations can be tackled easily, while the intrinsic robustness of

the design provides great flexibility to achieve sensing even in very small spaces.

Designers and potential users wanting the best choice of sensing technology for their valve application should contact TT electronics Technology who specialise in designs for even mission-critical applications. Their technology experts can advise on the optimum technology platform and develop a bespoke solution to many types of sensing requirement.

Where accurate, repeatable and reliable sensing is required for virtually any valve application, these technologies can fit the bill. Valve manufacturers now have an additional way to create competitive advantage, no matter which sector they specialise in.

TT electronics Technology is part of the sensor division of the global TT electronics Group. It is recognised around the world for delivering 'best in class' sensor solutions to some of the toughest problems in the automotive sector, and now solves challenging problems in aerospace, medical, agricultural and industrial applications. The Company operates from bases in the UK, Germany, India and China and has a network of distributors providing support to customers worldwide.

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Spirax Sarco helps Northumbrian Water halve its steam raising energy

Spirax Sarco has helped Northumbrian Water to halve the energy it uses to raise steam at its Bran Sands anaerobic digestion plant. The work has been so successful that the utility company now plans to work with Spirax Sarco and apply the same approach in its new plant at Howdon.

The energy-saving project centred on solving an issue with two boilers at Bran Sands where a low-water alarm would come into operation, even though there was plenty of water in the system. Low-water alarms made the boilers cut out, reducing the time that the boilers were in action. *"The issue slowed the process down,"* explains Frank Errington, Works Coordinator at Bran Sands. *"We'd lose energy as the boilers were on and off constantly and were cooling down during the downtime."*

Northumbrian Water called in Spirax Sarco engineers, who quickly spotted that the existing level probes and controllers were not suitable for the application. Replacing the controls with equipment from Spirax Sarco solved the problem.

Spirax Sarco supplied two LP30 self-monitoring water level probes for each boiler, along with LC3050 level controllers. Rewiring and a new control panel completed the new low-water alarm system.

Bran Sands was also experiencing a growing issue with false alarms in its high-water control systems, although they didn't cause the same downtime and energy losses as the low-level false alarms. So Spirax Sarco also replaced the high-water probes with its own LP31 probes.

Finally, the utility company opted for a Spirax Sarco service agreement to keep the boilers working properly in future.



"Both boilers are now available most of the time and we're experiencing stable operations," says Mr. Errington. *"The energy savings equate to about 50% of the energy needed for raising steam."*

Northumbrian Water is so pleased with the success at Bran Sands that it has now asked Spirax Sarco to apply the same boiler controls at its new anaerobic digester facility in Howdon, which is currently under construction.

"Spirax Sarco are very good at what they do. They're very helpful and very knowledgeable and we get a good response from them," says Mr. Errington. *"They're similar installations. Howdon is an enhanced version of Bran Sands and the process is the same."*

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Pentair Valves & Controls launches new pilot-operated pressure relief valve for high temperature environments

Pentair Valves & Controls has launched the new Anderson Greenwood 5200 pilot-operated pressure relief valve to offer overpressure protection for challenging economizer applications in heat recovery steam generators (HRSGs). The 5200 is specifically designed to withstand the high temperatures and pressures in HRSGs in combined cycle power plants, while meeting the stringent ASME section 1 code requirements for both steam and water.

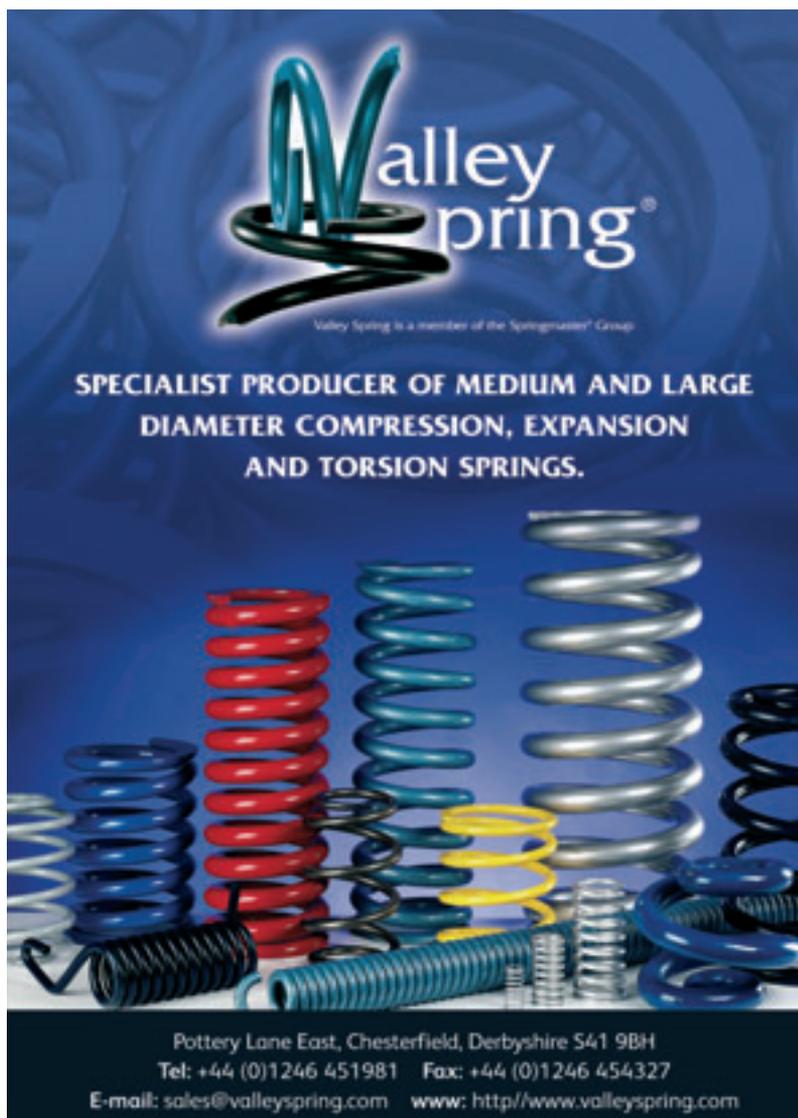
The latest pressure relief valve from the Anderson Greenwood portfolio provides stable performance levels in steam and hot or flashing water, offering plant operators effective boiler protection in overpressure situations. As a modulating pilot-operated valve, the 5200 will only open in proportion to the overpressure, eliminating valve chatter when exposed to water or water flashing into steam. At the same time the new valve boasts a full nozzle design and metal main valve seat, allowing it to withstand higher temperatures up to 1000°F/538°C. As a result, the valve achieves maximum tightness during the critical start-up processes and after relief cycles, allowing the system to operate closer to set pressure without valve leakage.



This not only reduces maintenance frequency and costly shutdowns, but also increases production capacity, allowing operators to increase overall system output. The 5200 can easily be installed to replace existing spring loaded valves and only requires a single adjustment for set pressure changes.

"The 5200 is a unique innovation that provides our power and boiler customers with the reassurance they need to meet code requirements and higher temperatures, while having a reliable product that reduces the chance of leakage during critical applications", said Cliff Marsh, Global Product Manager, Pilot Operated Pressure Relief Valves, Pentair Valves & Controls. *"The 5200 was designed specifically for HRSG boiler economizer applications and meets the severe service demands of both steam and water. It is another example of our broad portfolio of customizable valves and controls products that customers rely on to meet the most critical safety needs in the power industry."*

Anderson Greenwood and Crosby are the world's premier manufacturers of high performance safety valves. The 5200 is an addition to the brands wide range of piloted-operated relief valve products, which also includes the Series 5100, the first non-flowing, modulating pilot-operated pressure relief valve that became certified under ASME Section I.



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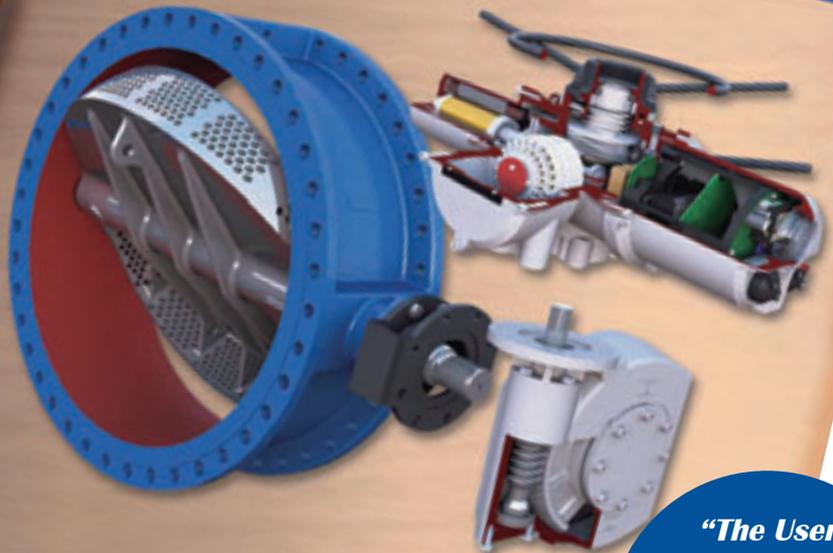
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