BVAA

Issue 23

VALVEuser® MAGAZINE

Valve World Expo Focus

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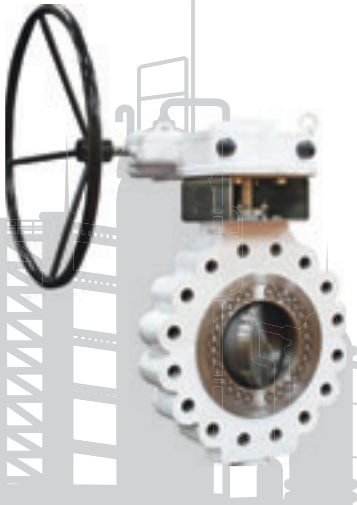

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VALVEuser MAGAZINE

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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.

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

Supply and Demand

by BVAA Director, Rob Bartlett

Welcome to the latest edition of Valve User magazine!

In this issue, I'm delighted to bring to readers the first in a series of insightful articles from ITR Economics, recommending 'invest in the future' – the theme of my own 'Comment' last time.

I lately attended a conference on 'the young' - another investment I'm prone to bang on about. Since most of my working life I've usually been the youngest in the room, this perhaps comes partly from a sense of self-preservation!

Skills shortages abound in engineering. Training, apprenticeships – and crucially competences - are only relatively recently on the radar outside manufacturing. However it seems it's largely up to us to plug the gaps in our own industry right now, as clearly we cannot yet count on the Government or the educationalists to routinely deliver the new 'raw material' we need.

Like all the boys in my year, I remember being introduced to 'Technical Drawing' at the tender age of 11. I was encouraged to choose that and another engineering subject at age 16, along with 'Metalwork' – a once independent subject long-since distilled to be a tiny part of a subject now called 'Design & Technology' - which I can advise contains precious little of either commodity! At 16½, I unsurprisingly became an engineering apprentice. My humble school was, from the moment I arrived, preparing me for a career in a buoyant local industry, which needed regular injections of new blood.

At my 'youth' conference, the predominantly 'grey' delegates - company bosses mainly - were advised to expect new young employees to arrive probably having never had any previous paid work, without any social or indeed actual skills, and to accept they would: - work erratic hours, 'socially network' constantly while at the workplace, probably ignore instructions they didn't like and hold unrealistic expectations about their future prospects. Indeed I was once asked by an employee when they could expect a management post – just weeks after starting their first ever job! (see page 20).

At a time of very-high unemployment in the young, it's perhaps time that the education system responded to supply and demand, and at least offered potential employers better material, and their students a better prospect of long-term employment. It's also incumbent on industry – via local schools and colleges - to encourage them to deliver what we need (see page 84).

Cover: Cameron's General Valve® Twin Seal™ Double Block & Bleed plug valve in a multi-product storage and distribution system.

BVAA

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BOOKING FORM

BVAA Training Courses – March 2013

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** – £235.00, **non-members** – £350.00 – Monday, 11th March
- Introduction to Valve Actuators: **Members** – £235.00, **non-members** – £350.00 – Tuesday, 12th March
- Control Valves: **Members** – £235.00, **non-members** – £350.00 – Wednesday, 13th March
- Safety Valves: **Members** – £235.00, **non-members** – £350.00 – Thursday, 14th March
- Safety Integrity Levels (SILs): **Members** – £235.00, **non-members** – £350.00 – Friday, 15th March
- Managing Commercial Risk: **Members** – £395.00, **non-members** – £450.00 – Monday, 18th March
- PED & ATEX Directives: **Members** – £235.00, **non-members** – £350.00 – Tuesday, 19th March
- Fluid Sealing: **Members** – £235.00, **non-members** – £350.00 – Wednesday, 20th March
- Diaphragm Valve MasterClass: **Members** – £235, **non-members** – £350.00 – Thursday, 21st March

Delegate Name:	Course Required:	Email:

Company Name:

Address:

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BVAA News

BVAA & NOF Energy Business Development Partnership Gathers Pace

'Getting to know Subsea 7' – a typical networking lunch organised by NOF Energy.

The BVAA and NOF Energy - *the business development organisation for oil, gas, nuclear and offshore renewables sectors* - announced a new Business Development Partnership in the summer.

NOF Energy is supporting the BVAA with the organisation and delivery of a broad range of networking events and a range of traditional and online marketing activities, which focus on supply chain opportunities across the oil, gas, nuclear and offshore renewables sectors.

Since the summer, the two associations have co-operated on several Networking events, the biggest being a networking lunch in Aberdeen with Petrofac on the 30th August.

Fifteen BVAA members were among the 170 delegates who attended, and the feedback from BVAA members was very good indeed.

The two Associations are now working towards improving still further the service, which opens up opportunities for BVAA members to attend both UK and overseas events.

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 one coming up 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

New Look Valve Meetings

On 5th September 2012, Peter Burnett (Heap & Partners) officiated as Chairman at a new look Valve working group meeting. In addition to the usual Technical & Standards business, the WG received two interesting presentations, one from John Proctor of Moontown Ltd on PTFE Sealing products, and another from Richard Stark, Project Services Manager for Apache North Sea.

Peter Burnett commented, *'The BVAA technical work continues unabated, indeed it is increasing now with the numerous standards under development in CEN and ISO. However the presentations have introduced a new, highly informative element to Valve WG meetings which we are keen to develop.'*

John Proctor of Moontown presenting to the Valve WG on PTFE sealing.

BVAA AGM – Don't Miss Out

BVAA's AGM, Economic Forecast and Dinner Dance will be held this year at Slaley Hall Hotel in Northumberland, on Friday 7th December 2012. Places have been snapped up and, as the deadline on the rooms block booking has now closed, rooms are now released back to the hotel for general sale – therefore they could sell out! If you want to book but haven't yet done so, don't miss out! Members – please complete and return the booking form on BVAA's homepage ASAP, www.bvaa.org.uk

Economic Forecast

This year, the AGM day will commence with an extended presentation by Alan Beaulieu of the world renowned Institute for Trend Research, entitled *'The Economic Outlook & Beyond.'* Always entertaining, witty and insightful, Alan presents at Valve meetings in the USA again and again, so the presentation should be of special interest to BVAA members.

Alan Beaulieu

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Joint BVAA / BSI Actuator WG

On 4th October 2012, the BVAA Actuator WG met again at BVAA HQ under the Chairmanship of Peter Hirst (Rotork). By arrangement with British Standards Institution, the WG also met in a combined session with BSI Actuator WG, PSE/18/5.

Peter Hirst commented, *'This is a very efficient arrangement between BVAA and BSI, holding both meetings at the same venue with the same experts. It saves a great deal of time and allows us to fully discuss the entire national and association business in one session. BSI's Charlie Duncombe and Rob Bartlett of BVAA work closely together with BVAA Technical Consultant Peter Churm to ensure we have a very productive meeting.'*

The combined BVAA / BSI Actuator WG meeting at BVAA.

BVAA Customer Golf Day

Here at BVAA we've been delighted with the response to our highly enjoyable golf days. Our autumn gathering was very special however, as it was our first dedicated 'Customer Day' for members and their customers, generously sponsored by HS Pipequipment, Control Valve Solutions and Hobbs Valve.

Sixty keen golfers assembled at Murcar Links, Aberdeen, on 6th September, at an event largely organised on BVAA's behalf by Murcar-member Derrick Mackenzie (HSP). A challenging course, Murcar certainly provided a lot of entertainment during the day.

Prize winners were:-

1st **Cameron (75 Points)**
Andrew Strachan, Jim Harrigan, Mark Shipp, Bill Daniel

2nd **BEL Valves (74 Points)**
Peter Robertshaw, Gavin Coleman, Sandy Meldrum, Ciaran O'Donnell

3rd **Control Valve Solutions (67 Points)**
Mac Stevenson, Nathan Gardiner, Paul Clueit, Martin Gordon

Individual Prizes

1st Stephen Davidson with 34 Points

2nd Alan Morrison with 33 Points (Better inward half)

3rd Jim Harrigan with 33 Points

Nearest the Pin - Martin Gordon

Longest Drive - Sam Griffins

Longest Day - Alun Jenkins

BEL Team: (l to r) Ciaran O'Donnell, Sandy Meldrum, Gavin Coleman, (awarding the prizes Neil Kirkbride, BVAA Chairman) and Peter Robertshaw.

Blend of youth and experience for 3rd placed CVS team. (l to r) Paul Clueit of Enquest, Nathan Gardiner (CVS), Martin Gordon (Enquest), BVAA Chairman Neil Kirkbride and Mac Stevenson (CVS).

Our Generous Golf Day Sponsors:

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More New Members!

BVAA Membership continues to grow and grow. Our latest recruits include: -

Peter Wright (MD) and Dan Stafford (UK Sales Manager Process) of ISIS Fluid Control Ltd with their BVAA member plaque.

ABB team (l to r) Les Slocombe, Gabby Weaver, Susan Sierakowski and Neville Childs.

Alex Lattimer and Kath Payne of the Academy of Joint Integrity.

Dichtomatik staff proudly hold their plaque.

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Mad Hatters

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

BVAA hats continue to travel the world, sometimes in surprisingly large numbers!

Pictured is a huge team from BEL Valves, bravely doing the Coast to Coast Cycle Ride (C2C – 138 miles) over the first weekend in October. The event was originally organised as one of BEL's social events for the year but took on a new meaning when one of the intended riders unfortunately passed away when on holiday this year. So BEL undertook the challenge in memory of Davey Leigh. All donations – including one from BVAA - will be split between Davey's family's chosen charity – The Stroke Foundation – and Cancer Research UK, another charity that has a special meaning for so many of us.

A website site has been set up for donations, see http://uk.virginmoneygiving.com and search for 'Alison Ennis.'

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

Hatted BEL Valves team re-entering Northumberland.

Also pictured (above) is BVAA's own Rob Bartlett, but can you identify the famous island in the background? It was said once you went there, you never escaped! There's £50 to the charity of your choice if you are the first person to contact Rob with the correct answer. Emails to rob@bvaa.org.uk

By BVAA's Technical Consultant, Peter Churm

TECHNICAL HOT SPOT

Approval of Draft ISO/DIS 28921-1

Draft ISO/DIS 28921-1 Industrial valves - Isolating valves for low temperatures application Part 1: Design, manufacturing and production testing

The result of the DIS enquiry on ISO/DIS 28921-1 *"Industrial valves - Isolating valves for low temperatures application - Part 1: Design, manufacturing and production testing"* was approval by the majority of P members with comments. These comments will now be reviewed and considered by ISO/TC 153/SC 1/WG 13 for inclusion in the standard prior to a further issue for formal vote.

The purpose of this International Standard is the establishment of basic requirements and practices for design, fabrication, material selection and production testing of valves used in low temperature services.

It applies to gate, globe, check, butterfly and ball valves and may be used for other valve types used in low temperature services from – 50 °C down to – 196 °C.

This International Standard covers valves with body, bonnet, bonnet extension or cover made of metallic materials having nominal sizes DN: 10 to 900 and corresponding nominal pipe sizes NPS: 3/8 to 36.

Valve World in Focus

Valve World: BVAA's impressive group stand

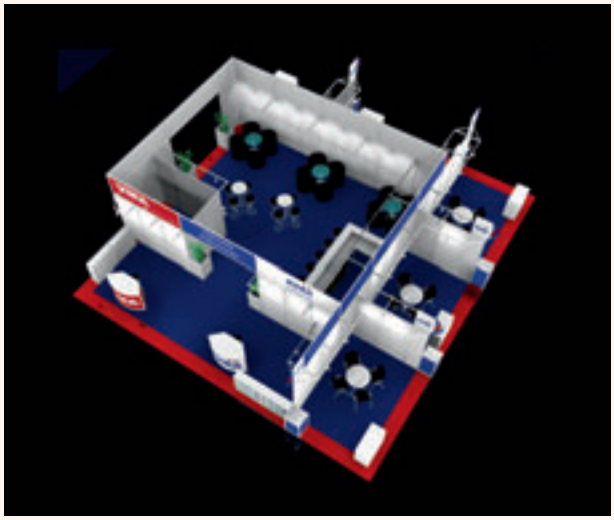
As it comes around only every two years, expectations are high for this November's Valve World Expo in Dusseldorf, Germany!

Nearly 40 BVAA members will have a presence of some sort at the exhibition, with several presenting papers at the world renowned conference, and many more attending just to 'walk the halls.'

BVAA will be hosting a Group Stand for the first time (Hall 4, C13~21 and D14~22), which we will be co-hosting with our friends at the Valve Manufacturers Association of America (VMA). Co-exhibitors will include BVAA members Dynamic Ceramic, Mogas, Maher and Total Carbide, with VMA companies DFT and QTRCO also attending.

The Group Stand will also feature an impressive Hospitality and Meeting area, which no doubt will become the UK and USA 'embassies' for the duration of the event. Why not call by for a chat, coffee, or even specially exported British real ale!

BVAA will also be sponsoring again the British Reception.



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03 E86

AUMA
03 E74

Bonomi
03 B01

Bray
03 D19

Cameron
03 A54
03 H20

Crane Chempharma Flow Solutions

Crane Energy Flow Solutions
03 D39

Dynamic Ceramic Ltd
04 C21

EBRO
03 D45

Emerson Process Management
03 E19

Flexitallic Ltd / Novus Sealing Limited

Academy of Joint Integrity
03 D87

Flowserve
03 C53

Hobbs Valve Ltd
03 G88

James Walker
03 E20

John Mills Valves
03 B51

Maher Limited
04 D14

Metso Automation
03 F46

Micro Spring & Presswork Co. Ltd.
04 C54

Mogas Industries, Inc
04 C19

OMB
03 E01

Parker Hannifin
04 G35

Pentair (ex-Tyco) Valves & Controls
03 D74

Pepperl+Fuchs
04 A34

Robert Cort Valves Ltd
03 B51

Rotork
03 E53

Saint-Gobain
03 B88

Shipham Valves
03 B51

SIPOS Aktorik
03 D36

Smith Flow Control Ltd
03 H85

Springmasters Ltd
04 A48

Springtech Ltd
04 B54

Total Carbide Ltd
04 C15

Velan Inc.
03 G51

Wärtsilä Valves Limited
03 B51

Xylem (Midland-ACS)
03 D52

YPS Langley Valves Ltd
03 C87

Up to date Hall Plans can be found at http://www.valveworldexpo.com, or alternatively download the 'App' for iPhone or Android.

Prepare to Act and Invest in Long-Term Growth

"As the euro makes additional gains into 2013, BVAA members should continue to pursue quality in products and services to differentiate against competitors."

by Will Skebey of ITR Economics

BVAA Introduction

BVAA recently engaged Alan Beaulieu, President of ITR Economics and a regular speaker at VMA Annual Meetings, to speak at the Association's AGM meetings on December 7th 2012. Here his colleague Will Skebey gives Valve User readers the first of a series of interesting insights into the economy, both short and long-term…

The European continent has suffered through various waves of positive and negative news during recent months, yielding the questions: Where is the economy going and how can I prepare for what lies ahead? At ITR Economics International, we highlight the emerging economic, financial, and (to a lesser extent) political trends to help businesses successfully navigate through the uncertainties of an unstable economic environment.

Debt talks dominate the agenda as European leaders seek to alleviate the pressure of bloated government deficits in over half-a-dozen countries. While progress toward a pan-European financial agreement is slow, several positive signals have developed over the course of this year.

Both German and French leaders remain committed to ensuring that the economy possesses the necessary liquidity to keep consumers spending and businesses at work producing goods and services. Germany's Constitutional Court gave judicial approval for monetary contributions to the European Stability Mechanism. The European Central Bank (ECB) is doing its part to increase lending by lowering interest rates and accelerating the bureaucratic processes. To prevent future financial problems, politicians throughout the continent are seeking uniform regulations and oversight for the banking sector. Additionally, governments are examining tax, spending, and public services reform as a way to shrink deficits. Successfully solving these difficult issues will put Europe in a better position for long-term growth and prosperity.

Despite discouraging headlines in the media, economic data is showing positive indications for Europe in 2013. The OECD's Europe Leading Indicator (an index comprised of economic variables) is trending upward using a year-over-year comparison, suggesting that a recovery trend will emerge in the overall economy in 2013.

OECD Europe Leading Indicator trend

Europe Retail Sales are rising to unprecedented levels (annual basis), although much of the growth can be attributed to expanding UK, German, and French retail markets offsetting less activity in other smaller countries. Companies with substantial exposure to the Spanish, Italian, Portuguese, and Greek consumer sectors need to divert resources to areas with more stable government finances and sustainable demand.

A weakening euro gave euro-area manufacturers a pricing advantage in non-euro markets in the first seven months of 2012. The recent strengthening of the euro following the announcement of the ECB's bond buying program and the approval of German aid to the ESM is lessening the currency advantage. As the euro makes additional gains into 2013, BVAA members should continue to pursue quality in products and services to differentiate against competitors.

Macro-economic trends will provide a host of factors for companies to consider when projecting future demand for products. This is an opportune time to examine internal production processes with the goal of increasing efficiency throughout the organization. It may seem counterintuitive to spend money in this period of uncertainty, but efficiency investments now will increase your future profitability for years to come. Training of personnel will be an important aspect of the drive toward efficiency.

Industry Trends

The world oil and gas industry is expanding to record levels, supported by rapidly increasing energy demand in emerging markets. Global mining machinery production activity (minus North America) is rising at a 3.4% annual rate, and we expect more gains in the near term. Europe's weakening economy is yielding a less favourable environment, but improving conditions in other regions, such as Brazil and Taiwan, are helping worldwide activity. In the long term, the mining machine industry will benefit from the world's insatiable appetite for fossil fuels to power automobiles, power generation facilities, and for use in consumer goods. The North American oil and gas market has grown a more robust 16.2% during the past year. US, Canadian, and Mexican companies are producing more and intensifying exploration efforts on the continent to reduce reliance on Middle Eastern energy. Competition in this region will be fierce, but exploiting and developing competitive

advantages will position your company for success in this market.

Understanding how your business functions in relation to the national, regional, and global economy will position your company to benefit from opportunities that competitors may not see. Whether it is through industry research, product development, or exploring new markets, now is a good time to invest the time to establish effective business practices that will lead to sustainable growth for your company.

By BVAA's Technical Consultant, Peter Churm

TECHNICAL HOT SPOT

Enquiry into national regulations for Construction Products

During its last plenary meeting in June 2011, CEN/TC 69 discussed whether industrial valves must be considered as Construction Products. CEN/TC 69 launched an enquiry within CEN/TC 69 to determine which European countries have a national regulation (CPR) considering industrial valves (metallic and thermoplastic) as Construction Products.

Only Czech Republic answered having a National Regulation which, despite request from CEN/TC 69 secretariat, was not provided for review. Germany has a regulation which is not national, but regional.

Moreover there has been no request on the market for valves CE-marked under CPR.

At its June 2012 meeting therefore CEN/TC 69 decided to stop its work of drafting harmonized standards under CPR. If in the future there is a request on the market for valves CE-marked under CPR, then CEN/TC 69 will resume its work on valves for CPR.

SIPOS' rapid response to South American water shortage

Bottlenecks and shortages in water supply to the Colombian City of Valledupar, (870km north of Bogotá), required urgent attention. Within two weeks, SIPOS Aktorik responded with the supply of electric actuators to aid automation of the water treatment works.

EMDUPAR (Empresas de VALLEDUPAR), the water supplier to the City, looked to SIPOS Aktorik for support. Due to the immediacy of the requirement, and recognising that time was of the essence for EMDUPAR, SIPOS based their proposal on photographs of the scheme.

Drawing on their established track record supporting water industry installations, SIPOS' quote was technically competent and an order for 21 SIPOS 5 PROFITRON actuators with MODBUS interface and pedestals was promptly placed.

Comprehensive support services reinforced selection of SIPOS' products – local assistance will be given for installation, commissioning and control system integration for the first actuators supplied. On-site training will also be given to EMDUPAR's staff.

The comprehensive service and rapid response provided for the Colombian project has secured future orders for SIPOS from EMDUPAR.

your VU

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

MASTERclass

Joint Integrity Masterclass

BVAA is working very closely with new member 'The Academy of Joint Integrity' to offer Valve User readers a Joint Integrity Masterclass, to be held at the Academy's state-of-the-art training centre in Cleckheaton, West Yorkshire on Tuesday 29th January 2013.

Spanning 9am~4pm, the Masterclass will cover:

Life Cycle of the Bolted Connection

- Legislation specific to pressure Systems and PED
- Training and Technical Update – European Legislation
- International Standards – Training and Competence
- ASME Updates – Latest Initiatives

Selecting the correct Sealing Element for Valves and Associated Pipe work – Gasket Types

- Typical issues with Valve Installations – Installation/ Tightening

Practical Workshop – Flange Assembly Demonstration Unit

- Procedures and Practices specific to Assembly and Tightening
- Torque and Pre load
- Tagging / Audit Trail
- Failure Mechanisms – Root Causes

Factory Tour – Flexitallic – Manufacturing and Application team

Delegates will also be given a hands-on practical demonstration using the Academy's Flange Assembly Demonstration Unit (FADU). The demonstration will highlight the importance of correct bolting procedures through the Academy's clear, easy to interpret load monitoring software.

Gary Milne, Technical Training Manager for The Academy of Joint Integrity, said: *"We are pleased to be able to offer this Joint Integrity Masterclass to BVAA. This event will provide a useful platform for engineers and training professionals to discuss latest Technical Standards specific to Joint Integrity. Legislation recognises that 'Mechanical joints have the potential to cause serious injury, with competence related failures being one of the main causes of loss of containment,*

accredited training programmes to national standards are having an effect on such incidents in reducing Human Factor related issues.'"

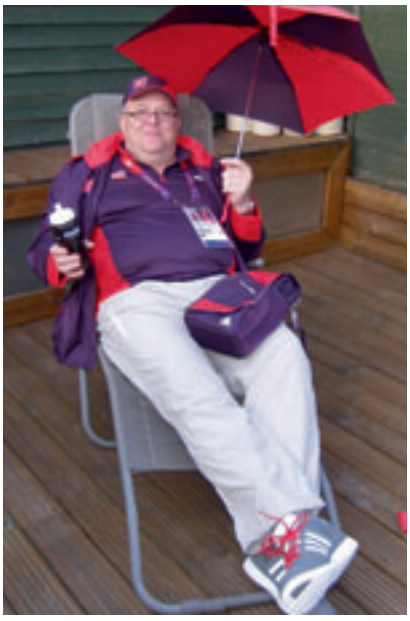
To book a place at the Masterclass contact Karen@bvaa.org.uk. The cost is £235+vat BVAA Members, £350+vat non-members.

The Academy is exhibiting at VALVE WORLD, 27-29th November 2012, Dusseldorf, Germany, Hall 3 - Stand 3D87

London 2012 Olympic Games

Adanac had a part to play in the London 2012 Olympic Games when Engineering Director, Neil West was offered a volunteer role. Neil spent time working alongside Omega in the Timing & Scoring Team in The Mall. Shortly after the games were awarded to London in 2005, it was announced that 70,000 volunteers would be needed. *"I soon recognised that something like this would only happen once in my lifetime and wanted to be involved".*

The volunteer recruitment was a lengthy process, the initially opportunity to 'express an interest' was followed about 2 years later by completion of the application form in 2010. Nearly a quarter of a million people applied to volunteer from which 100,000 were selected for interview. Neil's interview took place in February 2011 and resulted in the role being offered in September. A series of training events took place starting in February 2012 to prepare Neil and the rest of the 70,000 'Games Makers' for what was being billed as the greatest games ever. *"I have really enjoyed the whole experience, I've met some really nice people from a number of different countries and made some good friends. The camaraderie was fantastic, I found myself getting dragged into some bizarre situations including winning Bronze in a Grand Space Hopper race on Richmond Green the night before the opening ceremony."*



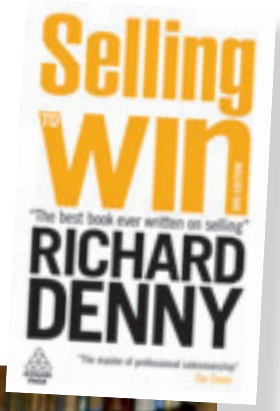
Games-time Neil worked as a Judge's Assistant for the three Race Walk events that took place in The Mall. *"I was assigned to an international athletics federation judge from Italy. My job was to record whenever my judge warned a competitor that they'd contravened a rule". Neil explained that the basic rules of Race Walking were pretty simple "the athlete must maintain contact with the ground at all times, and the leading leg must remain straight until it reaches the vertical position"* As such, each time the judge saw an athlete break one of these rules they would issue as series of warnings. There were eight judges around the 2km course, an athlete faced disqualification if they received two warnings from each of three different judges. Neil's job was to relay his judge's warnings electronically to a scoreboard so that the chief judge could monitor the number of warnings each competitor was receiving as the race progressed. *"Unfortunately I had a hand in the disqualification of a number of athletes over the three races, quite a responsibility making sure I entered the right competitor number."* London 2012 was the first Olympic Games to use the Omega electronic warning system, previously individual judges warnings were passed to the chief judge manually, normally by someone riding up and down the course on a bicycle.

The picture shows Neil (far left) with other members of the Race Walk Timing and Scoring Team at the start/finish line in The Mall.

Neil says he's come away from the games with some great memories and plenty of souvenirs of the whole process; not least he gets to keep his uniform. The London 2012 bid focused on leaving a long term legacy of the games. In addition to inspiring and encouraging people to participate in sport, it also aimed to make more people aware of the opportunities that exist for event volunteering and the experience that can be gained from getting involved. As a result of London 2012, Neil has become involved in a project within Suffolk that has seen him helping at a number of local events, taking on a wide range of jobs from parking 3000 cars at an open water swimming event to supervising a team of inmates from a local open prison loading peoples unsold items on to a lorry at a giant car boot sale for a children's hospice charity.

"Unfortunately, work commitments meant I had to turn down a role at the Paralympics but I've got my name down for Rio 2016."

Knowledge is not power



"Young people today just don't have what it takes", is the frustration voiced by so many employers.

In my opinion there is nothing wrong with our young people, it's what we are doing to them that makes too many unemployable. We are perpetuating an already massive problem with high youth unemployment. There are two prime causes, firstly lousy parenting; I am at an age where my parents set an example, where decent, acceptable, loving and fair discipline was the norm. Where self control was taught and accepted. Where manners and social skills were as important as school results and where we actually ate together round a table.

The second cause is our educational system where we are just not preparing our young people for today's challenging, competitive and more demanding market place. Be it at school, college or university our young people are being taught/educated by educationalists who in most cases have never worked in the so called "real world." Sadly the teachers just haven't a clue of what is needed and indeed wanted by employers. The youth leave university and college believing they are God's gift to humanity with all these unusable and superfluous qualifications. Attitude – communication skills and awareness that the customer pays the wages are virtually non-existent. Most can't even manage themselves let alone step into a so called management role to which they think they are entitled.

"Knowledge is power" is a stupid phrase dreamt up by an extinct educationalist. Knowledge is potential power, we get paid not for what we know, but what we do with what we know. There is a solution – see next issue.

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.

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New range of compact leak-free high pressure regulators from Rotork Fairchild

Rotork Fairchild, a member of the Rotork group of flow control companies, has launched a new range of compact high pressure pneumatic regulators for instrument and industrial control applications.

The new Rotork Fairchild range features patent pending improved valve seat sealing that eliminates the risk of media leakage often associated with conventional high pressure regulators. In addition, innovative diaphragm designs deliver superior accuracy and higher performance pressure regulation, especially with fluctuating supply pressures.

Constructed with 316 stainless steel bodies, the units are available as the HPD diaphragm design for pressures up to 413 Bar (6000 psi) and as the HPP piston design for even higher supply pressures.

The HPD design features high strength Inconel diaphragms as standard and will accurately regulate output pressures down to 1.66 Bar (25 psi). It is available with the standard polymer valve seat for media temperatures up to 80°C and supply pressures up to 241 Bar (3500 psi). Optional higher performance valve seats are fitted for temperatures up to 260°C and a maximum supply pressure of 413 Bar (6000 psi). The all-stainless steel HPP piston design models will also handle temperatures up to 260°C and increase the supply pressure capability to 689 Bar (10,000 psi).

The compact new Rotork Fairchild high pressure regulators deliver superior accuracy and eliminate the risk of valve seat leakage.

Both the HPD and HPP designs are available with 6mm (¼") ports in either 2 or 4 port configurations and in multiple output pressure ranges. Standard knobs can be replaced with tamper proof caps for high temperature and/or non-adjustment applications. Rotork Fairchild regulators can be mounted at the ports, the bottom surface or in panel mounted configurations.

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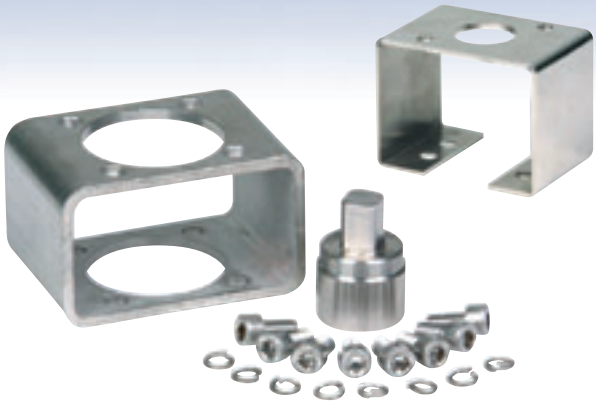

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Valve Asset Management:
Take Control of Your Valve Assets

Valve failure can represent far more than the capital cost of replacing the products. With many operators looking to maximize plant uptime and efficiency, regular monitoring and analysis can help the industry to maintain these essential components proactively and cost effectively.

By Michael A. Romano, global marketing manager for unconventional oil & gas and after sales service, Pentair Valves & Controls

A refinery that processes 250,000 barrels per day can easily contain thousands of valves. These products span all aspects of a plant's operations - flow isolation and control, steam management, overpressure protection, recirculation and much more. Given the essential presence and critical functions performed, valves require active maintenance to prevent unnecessary downtime.

Potentially serious consequences

If a valve should fail, there can be a serious risk of environmental impact, production losses, or a threat to the safety of the workforce. According to a study on containing fugitive emissions[1], 60 % of such emissions in refineries come from leaking valves, most frequently of which tend to be control valves. As operations become further integrated, one failure can have serious consequences. Add a 24-hour and immediate news cycle, and a single mistake can become a global news story and damage a plant's reputation beyond repair.

If valves are to be properly maintained to avoid the risk of failure, the question is quite simple, how does a plant operator determine when and how often valves need to be serviced?

Unplanned maintenance increasing

In response to managing the risks associated with valves, operators have increased maintenance spending, averaging $27 billion in 2011[2]. In today's refineries, this growth is higher than investment is additional plant capacity, demonstrating operators' need to maximise performance and efficiency from their existing equipment. Even with increased maintenance spending, however, the number of unplanned downtime events continues to increase. 50% of refinery maintenance is now unplanned, double the rate of a decade ago[3]. In fact, in 2011 alone there were an estimated 2,700 incidents involving product and component issues in refineries[4].

Plants and refineries are responding to this challenge by increasing valve maintenance planning. This approach helps keep valves serviced and operating properly. Good maintenance planning means doing the right maintenance on the right valve at the right time, with a different approach needed for each valve. Automatically scheduling valve maintenance on a single pre-determined cycle doesn't take into account the unique operating conditions that an individual valve experiences in service. This results in valves that fail sooner than expected (in between maintenance cycles) or valves that don't need to be serviced at the maintenance cycle. To optimize maintenance (including reducing the costs of it), a customized and integrated approach to valve maintenance is vital.

Triple offset valves used in pipeline applications

Testing of a pressure relieving device at Pentair (formerly Tyco) Valves and Controls El Campo Texas testing facility

Maintenance challenges

An integrated approach to valve maintenance planning requires plants to consider many factors that may contribute to downtime and safety and environmental risks, including:

- Changes to plant process conditions
- Equipment used throughout the plant's operations and any changes made to it
- Safety records and training of the workforce
- Service records and parts used
- Amount of maintenance needed to avoid failure
- Analysis of repeat breakdowns
- Quantity on hand and availability of spare parts
- Changes in regulations

For many plants, managing records on valve maintenance can be a significant undertaking, particularly if there are no complete or accurate records, or the data is stored in different locations by various personnel. This makes it difficult to optimize maintenance and almost impossible to identify trends. Compounding the issue, operators often choose to schedule regular planned maintenance across the board, hoping that will allow for the repair of any potential problem valves before they fail. This approach can lead to even more issues as it does doesn't take into account prior performance or repair history.

Moving to a more thorough and regular maintenance schedule to monitor a plant's valves can be achieved with an asset management solution. Operators work with a service provider to determine a predictive and preventive maintenance schedule customized for the site's specific valve types, taking into consideration each product's service and performance history.

Using a predictive maintenance methodology as opposed to an automatic approach, an operator prioritizes maintenance and service based on data that includes experience, observation, historical data, failure modes and testing, coupled with analysis of the probability and impact of a valve failure. This determines when maintenance should be scheduled. A comprehensive asset-management solution includes the following:

- Plant asset data, including testing of all assets as well as an ongoing service schedule for them
- Historical performance of the assets as well as the current condition of the valve and its components
- Inventory management and planning system detailing the location and count of each valve as well as spare parts
- Performance indicator report, with comprehensive metrics and charts showing calibration records and trending information
- Real-time monitoring and diagnostics to track repair cycles and data on assets that will help set maintenance schedules
- Proposed preventive/planned maintenance schedule detailing how often each valve should be scheduled for maintenance based on its performance

Valve asset management techniques

Risk Based Inspection (RBI) is a key analysis technique to achieve the optimum maintenance interval by assessing how likely the valve is to fail and how large the impact of a failure would be.

When assessing the probability of valve failure, inspection detail is carried forward to create an RBI path. Previous inspection history is reviewed and a revised probability score is determined. This score is then mapped to the RBI scheme to get a low, medium or high determination of the probability of failure. When assessing the consequence of valve failure, it is important to involve the process owner as they will have the best viewpoint as to the impact of a failure. They can then discuss and determine what they would consider high, medium and low impact of failure for that valve at that point in the process. Plants can then schedule their maintenance on critical plant areas based on these insights. Considering that 60% of valves are replaced or serviced prematurely[5], RBI can offer considerable performance improvement and savings by providing the planning methodology that

Direct-spring pressure relief valve testing at a Pentair Valves and Controls global service center

leads to servicing valves at the right time, not on an averaged schedule.

Another effective technique in an asset management portfolio is Failure Mode & Effects Analysis (FMEA). This type of analysis helps identify potential failures, evaluate the effects of these events, and identify the actions that could eliminate or reduce the chance of the potential failure. By minimizing the risk of valve failure, FMEA helps to maximize valve operational reliability.

Root Cause Failure Analysis (RCFA) is a troubleshooting maintenance method that investigates, analyzes and identifies the root cause of a valve failure. Identifying the root cause of valve failure and utilizing the information to make necessary changes to equipment, processes, or maintenance regimes, can prevent it from happening again. Solutions may involve replacing the valve with a more suitable option or changing a service interval.

Asset management will pay dividends

The benefits of an effective valve asset-management program are improved uptime and reliability, which can in turn optimize maintenance spending. An effective valve asset management system also helps a site avoid duplication of spare parts by improving inventory and availability. The valve population and maintenance schedule are used to optimize spare parts and maintain the right levels without compromising safety and production.

Plant operators must remember that they're not alone when it comes implementing a valve asset-management program. Close collaboration maximizes the expertise and capability shared between plant operators, valve service providers and valve manufacturers will yield the best results.

The benefits of preventive valve maintenance for a major UK refinery

Scope of work:

- A UK refinery signed a 5-year preventive maintenance contract with Pentair Valves & Controls that was renewable after the period for an additional 5 years. Contract is currently in its 14th year
- An intensive investigation was conducted that was used to feed inputs into the RBI scheme in order to develop the probability and consequence of failure
- Service intervals were then analyzed and re-defined based on the inputs

The results:

- Problem valves were identified, analyzed, and issues addressed
- By replacing these problem valves, the safety and performance of the plant was improved
- The average service interval went from 26 to 43 months, saving the refinery $2 million in service costs
- By 2006, 50% of valves required an inspection only every 36 months or less
- By 2011, this was further reduced to 20%

[1] Chemical Engineering magazine, June 2010 - www.che.com/technical_and_practical/5718.html

[2] HPI Market Data, 2011

[3] IIR, HPI Market Data, BP Statistical Review of World Energy 2011

[4] IIR Industrial Info Source, 2012

[5] 'Consider Fieldbus for Retrofit', Hydrocarbon Processing

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James Walker expands UK research facilities

James Walker's Laboratory Tensometers

James Walker has expanded its research and development capabilities with the opening of a half-million pound, purpose-built laboratory facility within the James Walker Elastomer Technology Centre in the North of England. The facility was opened by specially invited guest Debbie Keighley, Technical Capability Manager for Sellafield Ltd – a major customer of James Walker. Debbie is a Deputy Lieutenant of Cumbria and in her role at Sellafield, mentors and develops young scientists and engineers.

The new temperature controlled mechanical and analytical laboratories are kitted out with the latest instrumentation for differential scanning calorimetry and thermogravimetric analysis plus FTIR spectroscopy, equalling the very best facilities available for this type of work.

Full tensile and compression testing facilities are also included, with an environmental chamber allowing this work to be carried out across a full temperature range, whilst the dedicated 'wet' chemistry section incorporates 12 ovens with comprehensive data logging facilities.

The creation of the new facility is only part of the work being undertaken at the James Walker Technology Centre, with the company's pilot mixing plant and rheology laboratory also undergoing expansion. The pilot plant is at the core of the company's compounding and formulation activities, the in-house capability providing the flexibility required to service research and development plus a rapid turnaround of small batch runs for product and manufacturing trials.

Closely linked to the materials research laboratories is the product testing capability of the Technology Centre where further innovation within the rapid gas decompression testing facility has maintained its position as one of the leading analytical facilities in the world for RGD testing and assessment.

James Walker has built a reputation for its materials development and ability to test materials and seal concepts to the highest levels – factors that provide customers with the necessary peace of mind and assurance that a product will work when placed in a critical real-world application. Over the years this element of the company's business has become increasingly important and James Walker has built up a large team of experienced and highly regarded scientists and engineers. This team is not only responsible for the development of future technologies but also solves critical day to day problems for customers across every industrial sector.

"Solving our customer's immediate problems quickly and effectively is a cornerstone of our business. This was highlighted when our new equipment was called into action within days of installation by a customer in the nuclear industry needing a highly accurate and specialised regime to be carried out, assessing component behaviour under a simulated critical process" commented laboratory manager Andrew Douglas.

"Being able to carry out work like this and then manufacture a practical solution based on accurate test data is what we are known for. Many of our customers are as excited as we are about our investment in new laboratories and test rigs because they can see the benefits they will gain from this facility."

"Our team has settled in to its new home quickly and is enjoying the expanded capabilities we can now offer our customers and internal colleagues. With all the recent investment and the team we have assembled on this site, James Walker is definitely the place to be for any engineer or materials scientist involved in elastomer sealing development."

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James Walker

AUMA's apprenticeship achievement

For over twenty years, AUMA has supported engineer development through apprenticeship schemes. Since 1989, the manufacturer and global supplier of electric actuators has trained over one hundred apprentices. A recent success is Tom Gibbs' graduation from a scheme at Auma Actuators Ltd.

Following a three year on-site education programme encompassing a wide variety of functions of AUMA's business, Tom excelled in his understanding of the company's products and their ability to support wide ranging process control applications. Having completed an additional course in CAD training to enhance his skills, Tom is now employed in the company's after-sales and customer support department.

AUMA UK's investment in training sits within a wider international group commitment to provide on-the-job development to engineers of the future. At AUMA's main manufacturing campus in Muellheim, Germany the company employs an average of five apprentices each year and has a dedicated workshop to support this programme.

Paul Hopkins, AUMA UK Managing Director, (centre right) presents Tom Gibbs (centre left) with an award to mark successful completion of his apprenticeship.

By BVAA's Technical Consultant, Peter Churm

TECHNICAL HOT SPOT

prEN 14141 *"Valves for natural gas transportation in pipelines - Performance requirements and tests"*

This preliminary standard was submitted to the CEN enquiry closed on 11 January 2012.

The comments received by CEN/TC 69/WG 9 were discussed and considered and prEN 14141 was modified according to the accepted comments and sent to CEN CCMC for submission to Formal Vote.

This is a proposal for a European performance standard of valves for use in pipelines for transportation of natural gas in accordance with EN 1594. The significant properties of valves designed for a special application are defined by performance requirements accompanied by the description of tests to be carried out:

- by the manufacturer on the product during the manufacture; and
- by an independent accepted body on test samples for certification purposes;

to give proof that the valve meets the performance requirements of this European Standard.

A type test is included in this European Standard to satisfy the requirements of EN 1594.

When published this document will supersede EN 14141:2003.

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Controls are an essential part of any actuated package; Asco Namur and remote mount pilot solenoid valves are stocked in all voltages with safe area and Atex enclosures. Switchboxes can also be supplied for all pneumatic packages with a full range of mechanical and proximity switch options. PMV pneumatic and electro-pneumatic positioners can also be supplied for assembly and function test at our works.

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Specialist actuation skills showcased by SIPOS

SIPOS Aktorik will present its range of actuation products and services at the Valve World Expo (booth 3D36). Capabilities in specialist solutions will be showcased including the company's pioneering variable speed actuation technology. Other advancements in actuation displayed by SIPOS will include the HiMod extreme precision actuator along with an innovative solution to support subterranean installations and a turn-key solar system.

A central feature of the company's booth will be the SIPOS 5 Flash electric actuator. With established industry credentials, the variable speed capabilities of SIPOS' flagship product provide soft start and stop functionality – this avoids water hammer and has strong appeal for a range of process control applications.

Also featured at the Expo will be the SIPOS 5 HiMod series. Designed to address the most challenging valve control requirements for high end modulating duty, precision and longevity, applications include boiler start-up valves, turbine regulation and other instances where high levels of accuracy and flexibility are demanded.

Skills in the development of specialist solutions will be confirmed with innovative technology to support underground conduction systems and a solar initiative aids challenging remote location applications. SIPOS' solar package includes a full planning and specification service; component configuration; a solar power module; a switching cabinet; a SIPOS 5 Flash actuator and remote control or time & sequence programmer options for a complete bespoke solution.

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

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By BVAA's Technical Consultant, Peter Churm

TECHNICAL HOT SPOT

Safety devices for protection against excessive pressure

Assessment of CEN Consultant on PED on FprEN ISO 4126-1, - 4, - 5

Mr Ed Haynes, CEN Consultant on PED, has made an assessment on the following draft standards and has made comments with regard to the relationship between them and ISO 4126-7 "Safety devices for protection against excessive pressure -- Part 7: Common data" (which is already published).

FprEN ISO 4126-1 *"Safety devices for protection against excessive pressure - Part 1: Safety valves"*

FprEN ISO 4126-4 *"Safety devices for protection against excessive pressure - Part 4: Pilot operated safety valves"*

FprEN ISO 4126-5 *"Safety devices for protection against excessive pressure - Part 5: Controlled safety pressure relief systems (CSPRS)"*

CEN/TC69/WG10 needs to consider these comments prior to the next revision or amendment to the standards.

However the assessment is positive, therefore the draft standards FprEN ISO 4126-1, -4, -5 may be submitted to parallel Formal / FDIS Vote.

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Cryogenic Masterclass

The growth in the LNG and Industrial Gases market has seen increased interest in low temperature and Cryogenic testing. Adanac's Technical Director Neil West and Business Development Manager Steve Busby discuss the *"Science"* behind dealing with valves at such extreme temperatures. Adanac has a long history with Cryogenic valves. Offering cryogenic modifications to a variety of valves for a number of years now and cryogenically testing valves since 2000.

The process of testing a valve at Cryogenic temperatures is a complex one. Firstly, the correct size of cold box must be used to ensure the amount of cooling media required is minimised. The valve can then take several hours to cool to the required test temperature. The actual process of testing the valve can often be relatively short, sometimes only 15-30 minutes, depending on client specification.

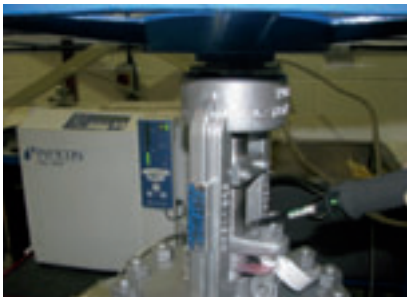
Valves can be tested for low temperature suitability for two reasons. Firstly, valves that are intended to operate with low temperature or cryogenic media, such as LNG or liquefied gases such as Oxygen and Nitrogen. The second category covers valves that can see extreme external temperatures. We regularly test valves destined for the Karachaganak project in Kazakhstan where ambient temperatures can drop to below -40 degrees C. Whatever the reason the basic purpose of the test is to ensure that the valve functions correctly at low temperature and to detect any leakages, either fugitive emissions or in-line leaks. The leakages are discovered using a piece of equipment called a Mass Spectrometer. The Mass Spectrometer probe detects minute quantities of escaping gases from the valve body. Any seat leakage is monitored using flow meters on our test manifold.

The standard choice of test gas tends to be Helium, or Nitrogen with a trace of Helium. Hydrocarbons are not a feasible option given the potential for explosions. It's also essential that the valve is cleaned prior to testing as the Mass Spectrometer is a very sensitive piece of equipment, and any contaminants could give a false reading or possibly damage the equipment.

Test results are obviously classified but in our experience the main reason valves fail test is incorrect specification. Valves are often manufactured correctly but the soft seals may not be suitable to perform at low temperatures. A residue of Hydrostatic test fluid in the valve can also cause a problem as ice can form on the seats which prevents operation of the valve. Therefore, when ordering valves required for use at low temperatures, ensure the valve is properly cleaned prior to test.

Cryogenic Gate Valve

Adanac standard procedure for testing valves at low temperature is to firstly subject the valve to an ambient pressure test. Any leakage issues are quickly revealed, enabling corrective measures to be taken before the more costly low temperature test is done.



Gate Valve Fugitive Emissions Test

Leakage through the gland could often be attributed to the packing itself, or even the parallelism of the stem. Even a slight taper on the stem can open up the packing, creating leak paths.
Finding suitable materials for gland packing is not an exact science. For example, materials that perform well at ambient temperatures may not be suitable for low temperature applications. Selection of suitable gland packing material is dependent upon the application. Adanac have found solutions in both bespoke seal manufacture, the use of particular proprietary products or a combination of both.

In summary, manufacturing valves suitable to operate at Cryogenic temperatures is a complex process, but correct material specification, accurate machining processes and suitable valve cleanliness all play an important part in the efficient performance of any valve required to operate in such applications.

Two month ISO14001 record for CVS

On 12th September, 58 days after moving into its new 2,500m² Portlethen facility, bespoke valve supply, service and repair company, Control Valve Solutions Ltd (CVS) has been accredited with ISO14001. This Environmental Management standard follows on from CVS' accreditation to ISO9001 which was achieved in 2010.

Jim Redpath from external auditors, ISOQAR passed comment on how professional CVS' Environmental Management System is and how well it is integrated across the company. CVS was accredited with no major or minor non-conformances.

John Beavers, Safety, Health & Environmental Manager at CVS said *"To achieve this award for a company that is only in its fourth year of trading is testament to the effective management of CVS, and the fantastic commitment of all employees."*

He continued *"ISO 14001 certification looked a long way off early in July, when we moved from Links Street, but with hard work and professionalism from everyone it has been achieved."*

CVS' target is to continue to improve and make CVS a more environmentally friendly, cleaner and safer place to work. The next step for CVS will be accreditation for its Occupational Health and Safety Management Systems, OHSAS 18001 to attain the highest standard of service.

Control Valve SOLUTIONS

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TECHNICAL HOT SPOT

By BVAA's Technical Consultant, Peter Churm

Standards & Directives Update

I recently delivered to the BVAA Valve Working Group a comprehensive Technical Update Report on all standards and European Directives relating to the Valve Industry, including an update on the work of all BVAA's own Technical Working Groups (Valves, Actuators, Seals and Repair).

BVAA Members can access this informative document from BVAA Secretariat, document reference BV001229.

Polymer manufacturing turns to Rotork for improved control valve performance

The introduction of Rotork CVA all-electric control valve actuation technology has improved the efficiency of the production process for a leading polymer manufacturing company in Australia.

Samos Polymers is a world-class manufacturer of polyurethane systems, producing a diverse range of cast elastomer prepolymers including spray polyurethane and polyureas, rigid and flexible foam systems, rubber binders and floor coatings.

The company wanted to automate the manually operated temperature control of water supplied to the condenser as part of the water/glycol separation process during the manufacture of polyester polyol. The existing temperature variation of only 1-2°C resulted in an unacceptable level of wasted product, so the success of the project relied on the achievement of exceptionally accurate temperature control, within +/-0.1°C. The application also called for full automation, operating from a 4-20mA control signal.

Rotork Australia proposed an all-electric control package, consisting of a V-port ball valve operated by a CVA actuator and, following a product demonstration, this package was selected as the 'stand-out' best option. With the equipment now installed, the CVA has successfully and autonomously operated with the sophisticated site control system to maintain the water temperature within the required parameters, delivering a ten-fold improvement in performance. As a result, product waste during manufacture has been greatly reduced.

A Rotork CVA actuator (model number CVQ1200) installed on a 6mm (¼") V-port ball valve in the Samos Polymers manufacturing plant at Sydney, New South Wales.

The CVA is designed to provide precise and fully modulating valve operation, with repeatability and resolution performance within 0.1% of full scale. The actuator also features quick and easy non-intrusive setting and commissioning using wireless Bluetooth® communication technology, whilst an integral data-logger stores an extensive record of operational and maintenance related information, including valve torque profiles and dwell times.

The installation at Samos Polymers is another example from an increasing list of industries throughout the world that have adopted Rotork CVA control valve technology in their processes, ranging from mining to food manufacturing.

By BVAA's Technical Consultant, Peter Churm

TECHNICAL HOT SPOT

RoHS Directive 2011/65/EU

The 'Department for Business Innovation and Skills' (BIS) has issued a consultation document on:

Implementation of the restrictions of hazardous substances in electrical and electronic equipment (RoHS) Directive 2011/65/EU.

The original RoHS Directive was published in 2002 and came into force on 1 July 2006.

The new RoHS Directive 2011/65/EU was published on 1 July 2011. It has a different scope and obligations on those placing products on the market.

This consultation is relevant to all businesses making and/or placing products with any electrical and electronic function on the market, wholesalers and distributors of these products, and trade associations in the electronics and ICT sector. The RoHS Directive primarily aims to ensure that EU Member States apply common restrictions on the levels of six hazardous substances that may be present in a wide range of electrical and electronic equipment, as well as minimising the end of life environmental impact of that equipment. It is a single European market measure and implementation is made by one law covering the whole of the UK.

This consultation seeks views on the implementation policy, draft regulations, consultation impact assessment and draft UK guidance notes. It is expected that additional, more detailed guidance will be made available by the European Commission later this year, as the UK is contributing to drafting work in this area.

Main issues associated with the new RoHS Directive

The original policy of the RoHS Directive to protect human health and the environment across the European single market remains the same. However, the new Directive brings forward changes to:

- Broaden the scope of products covered Require the *"CE"* and other marking of compliant products
- New conformity assessment procedures
- Provide for new exclusions from scope
- Provide for new criteria for the application and duration of exemptions
- The Introduction of an end date after which non-compliant product cannot be made available.

RoHS Orgalime Guide

Orgalime, the *"European Engineering Industries Association"* has announced the publication of the September 2012 update of the following Orgalime Guide: *"A practical Guide to understanding the specific obligations of Recast Directive 2011/65/EU on the Restriction of the use of Certain Hazardous Substances in EEE (RoHS II)"*, update of September 2012.

This updated Guide on the Recast RoHS Directive aims at explaining the main changes and obligations arising from the recast, especially in the following areas:

- Scope
- Substance restrictions
- Exemptions
- Alignment of the Directive with the New Legislative Framework
- Terms and Definitions
- Review
- Transposition
- Comitology

Its update of September 2012 provides to readers the common understanding of the Directive of the affected European manufacturers of electrical and electronic equipment in the context of the Commission's consultation on the draft RoHS2-FAQ Guidance Document of 15 June 2012 and its announced possible revision before 3 January 2013.

This updated version of the Orgalime RoHS Guide is available free of charge for downloading at http://publications.orgalime.org.

MASTERclass

Striking The Perfect Balance

Whilst system balancing is one of the more complicated tasks faced by commercial heating engineers, it needn't be beyond most installers. Here, Les Littlewood, Sales & Marketing Director at Albion Valves UK provides us with a handy reminder of the principles involved.

System balancing - Separating Fact from Fiction.

A well-balanced system starts with good system design. The designer calculates the mass of water required at each terminal unit, whether heating or cooling. Balancing valves create additional resistance in each branch to direct water in the required proportion to each terminal unit.

Design considerations will take into account: the size of space to be conditioned, space usage, occupancy, construction materials and their thermal properties, heat losses and gains and general climatic conditions associated with the building.

Fixed Orifice Commissioning Valve

Achieving optimum flow rate is essential - too high a flow rate may cause noise, whilst too low a flow rate may not dislodge entrapped air. Flow velocities will generally be in the range 0.75 to 1.15m/s for pipe sizes 1/2" to 2" and 0.75 to 3m/s for size DN65 to DN300 with pipe pressure drop per metre length generally calculated at 140 to 280 kPa.

Fixed orifice regulating valves (FORV) or variable orifice regulating valves (VORV) are an option to consider and system specification will dictate which type is to be used. Fixed orifice will nearly always be specified in the UK, with VORV more common in continental Europe and North America.

It is generally accepted that fixed orifice will provide a more accurate flow rate, usually to a tolerance of plus or minus 5% - compared to plus or minus 10% (or greater) of design flow rate in variable orifice systems.

Separate Metering Stations

Some systems will specify metering stations to be installed separately to the regulating valve. Generally, they are available threaded or wafer style for fitting between flanges and are suitable for chilled water, LTHW and MTHW.

Combined Metering and Regulating

These products are easy and quick to install and commission, and are suitable for chilled water, LTHW and MTHW.

A combined valve and metering station benefits from having a single piece body with no joint between body and metering

Jargon Buster

Fixed orifice – the aperture through which flow passes is non-adjustable

Variable orifice - the aperture through which flow passes is adjustable

Double regulating – at the set position the valve may be fully closed and re-opened to the set position

FODRV – fixed orifice double regulating valve

VODRV – variable orifice double regulating valve

LTHW – low temperature hot water – 70°C to 100°C

MTHW – medium temperature hot water – 101°C to 120°C

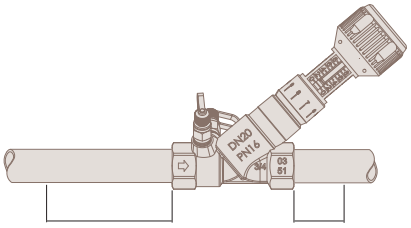
CHW – chilled water – typically 6°C to 11°C

Pressure – in kpa (kilopascal) 100 kPa = 1 bar

Flow – 1 kg/s = 1 l/s and 1000 litres = 1m³

Δp – Pressure drop - kPa

Signal – pressure drop measured across the orifice - kPa



station. This reduces potential leak points as well as being compact and a lower cost option than a 2-piece commissioning set.

Installation Guidelines

To ensure accurate flow measurement, guidelines for the installation of the valve or metering station will specify the length of uninterrupted pipe required on either side of the valve. This is to avoid turbulence caused by other fittings within the system or change of flow direction, which otherwise may be close to the valve, that could affect the accuracy of the reading.

In this example, 5 pipe diameters of straight pipe upstream and 2 pipe diameters of straight pipe downstream are required, with the 5 diameters upstream being the most important.

General Installation Considerations

Because valves are often installed in ceiling voids it is important that hand-wheels/levers/test points and drains point down for ease of access and commissioning.

Pipework and valves in CHW systems should be insulated and provided with effective vapour seals to minimise condensation and thus prevent damage to ceiling voids.

It is important to ensure that all air is removed from the system as this can seriously affect commissioning results and remember - commissioning should only be carried out when the system is cold.

Pump-attuned valves improve energy efficiency

By Uwe Herberger-Rosin, KSB Aktiengesellschaft

In actual practice, roughly one out of three check valves installed in pump systems is causing major losses due to improper selection. Particularly in connection with system conversions and overhauls, more attention should be paid to the proper selection and positioning of such valves.

Check (or non-return) valves are needed when a pump is stopped and the liquid column acting on the discharge nozzle or the pressure generated by other pumps operating in parallel could cause the impeller to reverse direction. Sensitive components like unidirectional mechanical seals could sustain damage as a result. If an appropriate valve is installed, any reversal of flow will close it, thus providing reliable protection against reverse flow.

Often, however, lift check valves (Fig. 1) and dual plate check valves (Fig.2) are installed without first having examined the prevailing flow conditions and resultant energy losses.

Frequently, the pump is the major point of focus at the time of installation, while the check valve is selected *en passant*, so to speak. Depending on the equipment configuration, this can cause serious wear and tear on the valve or even keep the system from achieving good performance.

The advent of speed control systems, though, has changed the situation for check valves. While pumps used to be either *"on at full load"* or *"off"*, many units are now operating at reduced speed in the part-load range.

When lift check valves are used, low flow velocities can cause constant *"opening and closing"*, because, unlike dual plate check valves, they are unable to reliably maintain a partly open position. Consequently, they might use up their entire service life in terms of opening/closing cycles within a few weeks. High volume flows can also cause problems due to high flow velocities in the narrow gaps at the disc/seat interface. This can lead to such pronounced wear and vibrations as to cause the eventual failure of the valve. Indeed, resonant vibrations might even cause damage to the pump itself.

Frequently, the connecting piece between the pump and the check valve is too short. As a rule of thumb, the valve should be situated at least the equivalent of five nominal diameters away from the pump – a length referred to as the flow stabilisation distance.

In a study conducted by KSB, more than 30 percent of all check valves were found to have been incorrectly installed, poorly selected, or undersized. There were even cases in which the installed check valve consumed nearly half of the head generated by the pump! Considering the huge number of check valves now in service in industry, there is an equally huge potential for cutting costs.

Tests document high savings potentials

In order to closely analyse the opening behaviour of check valves KSB has subjected its SERIE 2000 wafer type dual plate check valve to extensive tests on a purpose-built test rig (Fig.3). The basic goal was to examine which kind of check valve – wafer-type dual plate check valve or wafer-type lift check valve – is most suitable for which kind of application. Both types were therefore tested in diverse situations.

In the first test set-up, the technicians installed a lift check valve without a flow stabilisation section. The results agreed with practical field data. At minimal volume flow, the opening behaviour was unstable, and the valve began to chatter. At maximum flow, the spring vibrated strongly due to the high velocity of flow through the valve. Even the subsequent installation of a flow stabilisation section failed to improve that behaviour.

In the second set-up, the technicians installed a dual plate check valve with, and then again, without a flow stabilisation section (Fig.4). This time, the opening behaviour observed remained stable, even with the valve in a partially open position, and there was no chattering as in the case of the lift check valve (Fig.5). Any unsteady behaviour of the dual plate valve discs was remedied by installing a flow stabilisation section.

Under low flow conditions, the lift check valve remained very

unsteady despite installation of a flow stabilisation section (Figs. 6 and 7). Consequently, such valves should only be installed in cases where space constraints leave no room for any other choice, because its unstable opening behaviour can, under certain circumstances, result in a very high rate of wear. Nor is this kind of valve inherently suitable for use with a frequency inverter. This is also evidenced by a comparison of head losses calculated for both types of valve.

The individual loss coefficient, ζ, of a wafer-type lift check valve is approximately 4.5. With a dual plate check valve, the situation is intrinsically more favourable, because there is no change in the direction of flow in the valve, so its ζ value, at 0.4, is much better.

This can also be demonstrated by way of the head loss, Hv, as calculated according to the following equation. DN 200 mm pipes were selected on the basis of assumed flow velocities of v = 1 - 1.5 m/s on the suction side and v = 2 - 2.5 m/s on the discharge side. Applying these data, the equation yields 1 m as the head loss attributable to the lift check valve. The same equation yields a head loss of just 0.08 m for dual plate check valve. Depending on the application in question, this could mean that a smaller pump could be installed.

$$Hv = \zeta \frac{V^2}{2^g} Hv = \zeta \frac{V^2}{2^g},$$

To ensure stable, vibration-free behaviour of the closing elements, though, even dual plate check valves need a flow stabilisation section measuring about 5 x DN. This helps ensure smooth and energy-efficient pump operation under any set of load conditions.

Conclusions drawn

It pays off to take a holistic view of the valve, the pump and the frequency inverter as a system. The cost of installing a new valve redeems itself very quickly. Of course, optimal matching of pump and valve is not the only way to reduce energy expenditure. No matter which measures are taken, though, the decisive factor is to ensure that the system is designed to match the operating point.

Fig.1: BOA RVK wafer-type lift check valve

Fig.2: SERIE 2000 wafer-type dual plate check valve

Fig.3: Test set-up for examining the behaviour of check valves in combination with variable speed pumps

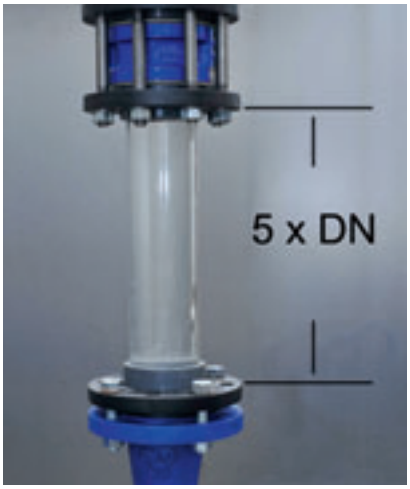


Fig.4: A SERIE 2000 dual plate check valve with flow stabilisation section

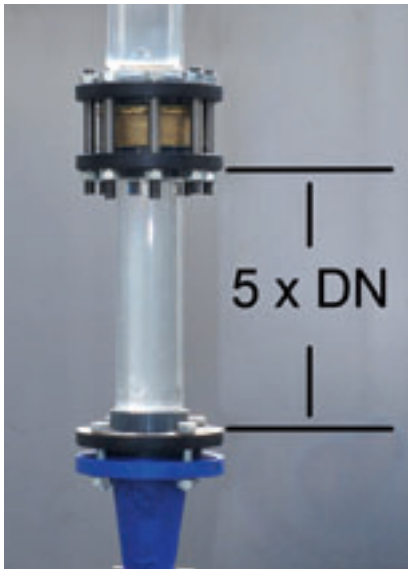


Fig.6: A BOA-RVK lift check valve with flow stabilisation section

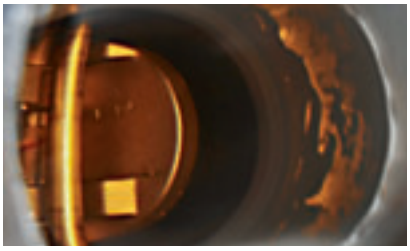


Fig.5: Looking inside a SERIE 2000 check valve

Fig.7: Looking inside a BOA-RVK lift check valve

KSB
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Happy ever aftermarket!

It's been an exciting 18 months for the Koso Kent Introl aftermarket team, since they moved to their new premises in spring of 2011. Having previously been situated within the main Kent Introl site, the team now occupies a dedicated facility a few hundred yards away, in Brighouse, Yorkshire.

This move has seen a rapid expansion in the team's ability to manage maintenance and upgrade projects for its global customer base. Investment into equipment in the facility continues: this autumn sees the installation of an additional hydraulic test bay on-site, to complement the team's existing hydro testing capability. At the same time, a new crane and 6-tonne floor scales are being installed. Furthermore, internal and external CCTV is being fitted to boost security measures and to allow customer-witnessed testing to take place without the customer needing to visit the site. New staff have been recruited to enable full support for the company's topside and subsea choke and control valve range.

All this investment means that the aftermarket team is increasingly self-sufficient, able to schedule its own workload priorities. This is vitally important since the team needs to accommodate not only scheduled shutdowns but also unplanned outages, as well as ongoing maintenance requests.

As a result, the scope and range of projects coming through the factory has increased, with the team looking after larger and more complex projects as a result.

Subsea choke valves re-fit

One such long-term project began earlier in the year, and is now fully underway. The team has been commissioned to refurbish up to 30 subsea choke valves per year for a global customer. The valves, with four body types and ranging in size from 2 to 4" have up to 100 components each, including the actuator. The team takes 8 weeks to fully refurbish each valve; first stripping it down and auditing the actual requirement before going ahead and carrying out the work. Each valve is worked upon independently, and its components stored separately in the secure, on-site storage bays, with a full audit trail being maintained throughout. The original body and bonnet will be brought back to perfect condition, and tungsten carbide trims fitted before testing is carried out to ensure the valve is ready to be returned to the customer.

The team has already processed and shipped six valves for this customer up to the end of August and is now fully geared up to meet the ongoing requirement for future valves.

Bahrain Natural Gas Project – actuator re-fit

KKI's aftermarket engineers have been just as busy away from the factory as they have been in it. Recently, four engineers have been supporting a month-long project in Bahrain; alternating between working in the field and at the customer's workshop. The team has been upgrading actuators, having to accommodate the fact that the units are subject to continuous external attack from sand and high environmental temperatures.

Azerbaijan – trim supply

Sand is also presenting major challenges for KKI's global customer with their operations in Azerbaijan. Unsurprisingly, downtime cannot be countenanced because of the scale of operations and the cost implications of stopping production.

Refurbished subsea valve, ready to return to Norway

KKI has been commissioned to produce a number of its advanced Vector labyrinth trim stacks to provide long-term solutions to the problems being encountered. These disk stacks allow up to 28 turns to accommodate high pressure drops, whilst significantly reducing velocity, noise and cavitation.

Whilst the Vector trims are in production, Kent Introl are first manufacturing temporary, sacrificial trims in both fully stellited stainless steel and tungsten carbide to keep production flowing in the short-term.

Martin Broadbent (right), Spares Manager, and Nick Parker, Service Manager are unsurprisingly, very positive about the future of the aftermarket service within KKI. Nick told us: *"Our goal of being self-sufficient, yet having full access to the expertise from the rest of the business, is now becoming a reality. We're able to take on a wider range of projects for customers, and can provide an even more responsive and high quality service that means their downtime is minimised – this is, of course, the primary concern of pretty much all of our customers."*

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ISE selects ASCO Numatics

International System EST (ISE) has selected Emerson Industrial Automation to supply control cabinets for a utilities upgrade project at SABIC's Petrokemya Arabian Petrochemical site in Al Jubail, Saudi Arabia. This significant order is for four large cabinets which will contain over 140 ASCO Numatics solenoid valves and a variety of other control equipment. The cabinets will be supplied fully assembled and certified – ready for installation.

"We chose Emerson for this important project because of their proven ability to engineer and manufacture cabinets such as these," said Salem Al-Khaldi, President of International System EST. *"They have the capabilities in-house to design and build these cabinets and deliver them to site fully certified. All we have to do is make one electrical connection and then connect the pneumatics at the bulkhead. This frees up our own engineering time through the design, engineering and installation phases of the project."*

"We are pleased that ISE and SABIC have recognised our abilities and awarded us this project," said Mehmet Caner, Regional Manager for Emerson's ASCO Numatics in the Middle East.

The manufacture of cabinets containing ASCO Numatics valves in Emerson's Dubai facility

ASCO Numatics 552 valves, a key component of the cabinets being supplied to ISE for SABIC

"We have full capabilities in our regional headquarters in Dubai to support our customers in the supply of cabinets and panels such as this. We are able to carry out all the work, from engineering design through to assembly and Factory Acceptance Testing (FAT)."

The cabinets, the largest of which is 1.8m x 1.8m x 0.5m, will be ready for FAT within ten weeks of drawing approvals. They will be used to automate valves located on the demineralised water and water purification plants on the site.

Plant includes leviathan valves

Situated on the coast at Chixi Town, south of Guangzhou in China's Guangdong Province, the Taishan Nuclear Power Station is expected to be one of the largest in the world. It is also China's first nuclear power plant to adopt the European EPR (European Pressurised Reactor) third generation reactor technology. The first phase of the project involves the construction of two EPR power plants, each with the world's largest capacity of 1750 MW.

On the station's conventional island project, Rotork has supplied more than one hundred IQ intelligent electric valve actuators for Velan wedge gate and parallel slide valves. Manufactured in sizes up to 36 inches and pressure ratings up to Class 1500, these valves will perform feed water and steam isolation duties. The contract included sixteen high speed IQ91 actuators with secondary IS gearboxes fitted to 36 inch Class 900 parallel slide valves for feed water isolation. Weighing in at over 14 tons each, these are the largest pressure seal valves that Velan has ever manufactured.

Operating large Butterfly valve with quarter-turn gearbox actuator combination.

The Rotork IQ actuators were specified for this contract and supplied through Rotork Controls Canada. Designed for maximum reliability with enhanced functionality, IQ actuators feature non-intrusive, intrinsically safe commissioning, data-logging and predictive maintenance capabilities. Reliability is enhanced by the double-sealed IP68 watertight enclosure, whilst the ability to download and diagnose operating data assists the planning and implementation of effective asset management with the minimum interruption to plant operations.

AlphaRadin Smart Wireless Valves

The patented AlphaRadin Controller can be paired with any switch or gateway. It can be used for applications where the flow of liquid or gas needs to be stopped or resumed remotely, safely and wirelessly. It can also be operated by mobile phone.

The Smart Wireless Valve from AlphaRadin is a secure two-way radio device that empowers users with the ability to remotely Shut-off the water supply to a building.

The smart valve has Many applications including maintenance shut-off, leakage minimization and flood protection in vacant properties and can also be used in: General industrial automotive systems, Industrial fire dampers, heat and ventilation systems, Domestic properties, Water/gas isolation including urinal flushing & commercial utilities (taps and showers), Security entrance systems including garage doors/ gates and hotel door entrance.

The Smart valve is attached to a single water pipe within a building for remote opening and closing of a water supply. It can be automated using a remote wall switch or a hand held device such as a fob or a walk- by system. Using gateway applications you can control the valve from a computer or a mobile phone from any location.

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ALPHA CONTROLS LTD

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Crossing the High Pressure, High Temperature 'Chasm'

The oil and gas industry is often criticised for not being at the cutting edge of technological advancement. But with the demise of 'easy oil' Operators and vendors are now leading the way in developing technologies to shape the world's energy future.

The joint challenge faced by the industry is one of developing safe, environmentally and economically viable subsea solutions for the oil and gas thresholds of deep water, high pressure and high temperature (HPHT).

Easier said than done. The developments represent a step change in technology with a significant 'chasm' to cross. HPHT innovation isn't just a linear extrapolation of the current technology. Sadly, up-sizing of the current technology just won't work on its own.

The rewards for crossing the 'chasm' and successfully bringing such technologies on stream, however will have a revolutionary impact by enabling access, reducing risk and reducing costs, transforming the uneconomic to the economic.

So what are the thresholds?
They have been termed as *Extreme*, defined as having pressures of up to 20,000 psi and/or temperatures of 350°F (176°C). Extreme HPHT wells are currently being drilled in the Gulf of Mexico region, on the shelf and in deep water, many of them exhibiting reservoir pressures and temperatures that approach 20,000 psi and 350°F. Some deep gas reservoirs, also on the Gulf of Mexico shelf have pressures and/or temperatures upwards of 30,000 psi and 450°F, propelling them into the *Ultra* HPHT designation.

And then you introduce the need to develop at *Extreme depths* – Gulf of Mexico's Abyssal Plain and the Atlantic margin sea floor reaching in excess of 3000m for example. This 'complication' extends the challenge and the design rules of the past need to be rewritten in order to optimise new designs.

So what does the technology step change look like for valve design?
Material selection is crucial. The choice and availability of materials very much

depends upon nominal bore size, the minimum and maximum temperatures and a third variable not yet introduced, the process conditions. On the metallurgical front, the design needs to recognise that, when high temperature liquid flows through a pipe or valve in cold water, the yield strength of the pipe is reduced — and along with it the pipe's ability to withstand high pressures, both internal and external. And so new designs take into account: Higher strength steels, composite materials for lightness, strength and corrosion resistance, cost effective base material cladding, material stability, prediction of deflection and permanent set.

Sealing technology presents its own challenges. One of the most obvious is the current widespread use of elastomers and thermoplastics, which are of course, sensitive to high temperatures. These materials may be used separately or together for sealing systems or sealing elements and for other components within the system.

No fully qualified technology exists in the market today and so closing these HPHT technology gaps poses great challenges to the industry in the design, manufacture and testing/qualification of a whole new generation of subsea equipment, including critical valves.

Jack St Malo R&D Valve

Development of these technologies requires commitment to R&D investment regardless of the changes to energy prices and earnings. Experience from a vendor perspective indicates that it takes years, not months to carry out the development of new HPHT technologies. Therefore good relations and close collaboration between vendors and operators is needed now, to ensure that the potential benefits of HPHT, deep water systems for both the industry and global energy supply security are realised.

Quickits Launch Stainless Steel Gearbox Range

Nottinghamshire based manufacturing company Quickits Limited is renowned for providing excellent customer service and reliable lead times for a vast range of valve & actuator mounting kits and their associated products.

In January 2012 Quickits added to its already successful cast iron gearbox range full stainless steel versions of both the WG quarter turn and WG/D de-clutch models.

One of the unique features of the QK stainless steel gearbox range is that the bodies are fully CNC machined from a solid billet, in-house using the latest state of the art CNC machinery. This reduces the risk of any porous pockets or weak areas that could occur due to casting and ensures complete machining concentricity throughout the machining process. Having full control over the design and manufacture also allows Quickits to supply stainless steel gearboxes on much shorter lead times than the market is currently used to.

The 'off the shelf' S/WG range, as it's known, consists of 4 models with output torques ranging from 200 Nm up to and including 2000 Nm.

Built with standard ISO base mountings covering F05 to F16 the S/WG range of gearboxes have a single piece input shaft and worm configuration as standard. With adjustable stainless steel travel stop screws this allows the units to be set between 50° and 90° and these are capable of operating in ambient temperatures ranging from -40° F up to and including + 176° F.

The stock de-clutch gearboxes known as the S/WG/D range consists of 3 models with output torques ranging from 678Nm to 3000Nm. In line with the quarter turn range the bodies are manufactured with standard ISO mountings top and bottom to allow direct mounting to ISO valves and actuators

Additional options include padlocking flanges, mountings for Namur or non-Namur switch boxes and full 316 stainless steel versions.

Weathering the Storm

F31K2 – Valve position sensing with a global view

Weathering the storm: F31K2 – Valve position sensing with a global view

Traditionally, limit switch boxes with mechanical, magnetic or inductive contacts are used to detect the position of the valve in valve actuators. However, open solutions are also gaining in popularity on the market due to their compact design and easy installation. The F31K2 dual inductive sensor with *"outdoor"* functionality completes the range of Pepperl+Fuchs open solutions.

This sensor series was designed for uncompromising outdoor applications. The *"house-in housing"* design of the sensor provides double the mechanical protection and impermeability. The sensor and control electronics are integrated in a single module enclosed in a tough, translucent housing together with the terminal compartment. The materials used for the housing are resistant to high temperatures, UV and corrosion. Large cable diameters and rigid cables do not pose a problem thanks to the large terminal compartment and pluggable terminal block.

The F31K2 has been designed for the international market. The requirements of the different markets and applications are extremely diverse. Different housing materials (electrostatically conductive plastics, aluminum, stainless steel) and connection options (metric cable glands, threads measured in inches for conduit cable glands) are used as a result. The temperature range of -40 to 75°C and IP degrees of protection IP66/67/69K cover a wide variety of applications. The target group for this product includes customers from the chemical/petrochemical, oil and gas industries. Typical areas of use include outdoor applications with Ex-nA approval for zone 2/22. A 4-wire DC version is available as an electronic output stage.

The proven BT65A/BT115A actuator concept from Pepperl+Fuchs is also compatible with this sensor series and consists of two actuator sizes suitable for all shaft diameters up to 90 mm and shaft heights up to 50 mm. An additional puck system with *"beacon"* that can be adapted quickly and flexibly to the valve was developed to significantly enhance the visibility of the valve position from a distance.

Summary

The new F31K2 completes the Pepperl+Fuchs product program of *"open solutions for valve position feedback on valve actuators"* with dual inductive sensors. The products in the range meet all the requirements of modern applications in process automation, from the compact F25 for small standard actuators to F31 sensors with or without a terminal compartment and flexible actuator system to the ultimate F31K2 outdoor sensor that offers maximum robustness, impermeability and an extended temperature range.

F31K2 dual sensor with actuator and display on the valve actuator

F25, F31, F31K and F31K2 dual sensor portfolio – a solution for every application

F31K2 with BT115A actuator on drive

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Redefining Flow Control

SFC Launches New Regulator Packs to Ensure Safe Operation of Valves

EasiDrive is a valve operating system that actuates hard-to-operate valves in power plants, chemical processing facilities and oil refineries. It is ideal for use wherever there are manually operated valves with high operating torques, hundreds of hand-wheel turns to open/close or are just difficult to operate.

To ensure the correct amount of torque is set to the EasiDrive system, Smith Flow Control (SFC) has now introduced a series of Filter Regulator Lube (FRL) packs. FRL packs manage the output available to drive the valve, preventing human error that can result in improper use of the system.

FRL packs have been designed in a range of colours so they can be identified and applied correctly to a range of valve systems. Packs can be factory set on a second regulator to limit the pressure to the specially calibrated torque device, reducing the output available to drive the valve. This now means that even though an operator can adjust the first regulator, the second will be set to a maximum pressure point, which can never be surpassed.

Mike Fynes, Sales & Marketing Director at Smith Flow Control, comments, *"This product has been designed to address the issues associated with applying incorrect torque at sites and will ensure the safe operation of the valve. The new packs have been adapted to include storage for the pneumatic gun- this makes it easy to carry the equipment and assemble the system on site."*

The new series of Filter Regulator Lube Packs will be launched at Valve World, Düsseldorf 27-29 November. Smith Flow Control provides engineered valve and key interlocks, pig launching systems, actuated valves and lock out/tag out products to protect lives and equipment in hazardous operations. SFC is flexible around clients' needs and output can be tailored to individual requirements.

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Products that require precision in their performance and significant research, design, prototyping and development are our strengths. This has made us a global leader in the manufacture of springs and related products.

From precise and critical medical applications, through to the technical performance of Formula One Racing and the robust and reliable requirements of the oil and gas industries, all our products carry with them a wealth of experience in their development.

We supply a wide range of custom designed springs and pressings to industries worldwide from our UK manufacturing bases in Buckinghamshire and Aberdeenshire. Our comprehensive service includes; design, tooling, development and manufacture drawing from our in-house R&D tooling centre.

We manufacture in accordance to **BS EN ISO 9001:2008** standards.

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IB series bevel gearboxes manufactured by Rotork Gears

Two sites, four million cubic metres of oil, four hundred and sixty-nine Rotork actuators

These apparently random statistics are all connected with a giant oil storage project in Central China created as part of a key national energy programme to provide crude oil reserves for national and commercial consumption.

At two brand new facilities, gigantic oil tanks with a combined capacity of four million cubic metres are being constructed, together with associated plant including heat exchangers and pumping stations. The sites are operated by pipework networks incorporating four hundred and sixty-nine explosionproof Rotork valve actuators and Pakscan control systems.

Rotork China worked closely with several valvemakers to supply the IQ intelligent electric actuators for valve control at both sites. The majority are IQ multi-turn units, many equipped with IB series bevel gearboxes manufactured by Rotork Gears. The balance comprises IQT quarter-turn and IQML linear modulating actuators. Virtually all the actuators are controlled and monitored by six Rotork Pakscan P3 two-wire digital networks, which are specifically designed for the reliable and efficient operation of valve actuators in the spacious environments associated with tank farm installations.

Engineers from Rotork and its agent have worked on the site continuously – even foregoing their holidays - to ensure that project deadlines were met. This high level of commitment to customer service and technical support is recognised as making an important contribution to Rotork's continued enlargement of market share in China.

This project is one of many energy infrastructure programmes in China and throughout the world that specify Rotork IQ intelligent valve actuation technologies with Pakscan digital control.

TECHNICAL HOT SPOT

By BVAA's Technical Consultant, Peter Churm

Results of the DIS enquiry on ISO/DIS 10631 *"Metallic butterfly valves for general purposes"*

The ISO DIS enquiry opened 21 December 2011 and closed 23 May 2012. The ISO/DIS 10631 was approved by 93% of P-Members voting with comments and only 1 negative vote.

The comments received will be considered and addressed by ISO/TC 153/SC 1/WG8 at its next meeting in September 2012 before being issued for Formal Vote early next year.

Spirax Sarco's insulation jackets

New Spirax Sarco insulation jackets save energy, cut costs, improve safety, are easy to order, instant to fit and have a long life – what's not to like?

Spirax Sarco is launching insulation jackets tailored for pipeline equipment, such as valves, steam traps and flowmeters. The jackets promise long life with no degradation in insulating effectiveness, enabling steam system operators to save energy and reduce carbon emissions with minimum hassle.

Insulating steam systems is the most cost-effective energy-saving measure that operators can make. Yet many steam traps, valves and other equipment are left uncovered to allow easy access for maintenance. Typically, a non-insulated steam trap will lose about as much heat as a one metre length of bare one inch diameter pipe, equating to a loss of £170 per year. Steam systems are often populated with 100 or more traps and valves, which, if not insulated, can mean several thousands of pounds in lost energy annually.
The new insulation jackets can reduce this heat loss by up to a factor of 12. Most sites will see a payback on the jackets within six to 18 months.

Tailored for specific products, the jackets are fastened with Velcro straps, making them quick to fit and easy to remove for access to the pipeline equipment when needed. The jackets also improve site health and safety by protecting personnel from contact with hot surfaces and help to create a cooler working environment.

Conventional insulation boxes need to be modified on site, with their effectiveness dependent on how well they are fitted. Spirax Sarco insulation jackets are matched to the product, enabling them to be fitted snugly without any modification, for maximum insulating performance.

The insulation in conventional aluminium-encased boxes also degrades quickly because it is in direct contact with hot surfaces. In contrast, the insulation material in Spirax Sarco insulation jackets is protected from hot surfaces by vinyl-treated glass cloth and comes with a three-year warranty.

"When Spirax Sarco engineers open a conventional insulation box that has been in place on a site for one or two years, they usually find the insulation material has degraded, drastically reducing its insulating capabilities," says Mike Skidmore, Product Manager, Spirax Sarco. *"Steam system operators can be confident that Spirax Sarco insulation jackets will save energy for many years without loss of performance."*

Ordering and obtaining the insulation jackets is very straightforward. They can be purchased at the same time as new equipment, or to retrofit existing installed equipment. The need to pay for visits by insulation specialists to measure for conventional insulation jackets is eliminated, saving time and cost.

In addition, Spirax Sarco insulation jackets help to improve the appearance of steam plant, an important consideration for many sites.

Finally, Spirax Sarco can custom-make jackets for any pipeline equipment, not just its own products, enabling all these benefits for every steam system operator.

Spirax Sarco
Tel: 01242 535319
www.spiraxsarco.com

Score Group plc launch new MIDAS® Sensor for Through Valve Loss / Leak Detection and Measurement

Score Group plc launched its latest innovative valve diagnostic product during ONS week in Stavanger. The MIDAS® Sensor (patent applied for), follows on from the successful launch of their MIDAS® Meter at the previous ONS Exhibition week, in 2010.

MIDAS® Valve Diagnostic products use proven acoustic emissions (AE) technology to identify through valve losses / leaks and then using proprietary algorithms to calculate and quantify any leaks found.

Valve leakage represents major risks to plant operations. These risks include:

Safety
Loss of containment of process fluids presents a major risk to personnel working on the plant

Environmental
Leaking valves / loss of fluid containment represents a potentially major risk to the environment

Efficiency
Lost production due to leakage and / or downtime due to poorly performing valves affects both plant efficiency and availability, which can result in both product and / or profit losses.

The ultra-portable MIDAS Meter® valve leak detector, is a fully wireless and intrinsically safe certified device. It is now in widespread use throughout the Oil & Gas, Petrochemical, Nuclear and Marine industries worldwide and is already delivering excellent results to Score's customers in these fields.

Improvements in customers' assets performance are being reported as a result of the improved valve management that MIDAS Meter® delivers. These improvements include; enhanced safety performance, environmental protection and process efficiency gains, where owners are moving away from traditional reactive maintenance programmes, into condition-based maintenance and then onto a more pro-active, predictive maintenance approach.

Building on this previous success, Score Group plc have now developed and released to market a new MIDAS® Sensor.

The new self-contained MIDAS® Sensor is designed for permanent installation, to provide non-intrusive, continuous, on-line valve performance monitoring. The sensor can be safely installed in hazardous areas, where intrinsically safe certified equipment is required. The sensor detects the early onset of valves' sealing performance decay and helps operators to identify, trend and quantify any through-valve losses / leaks, providing highly valuable feedback - especially for critical valves.

The measurable output from the MIDAS® Sensor is a 4-20 mA electrical signal, which is specifically designed to interface with existing and new build plant supervisory control and data acquisition systems (SCADA) or Score's own integrated V-Map™ valve monitoring system. Valve condition monitoring provides evidence which enables the appropriate operational maintenance actions to be taken, which in turn ensures the optimum management of valve populations for the asset owners.

MIDAS Meter® and MIDAS® Sensors can either be used independently or together as a fully integrated solution to provide targeted valve condition monitoring for an entire plant or process, depending on the potential risk and criticality of installed valves. The wireless and ultra-portable MIDAS Meter® is used for on-site surveys and for trouble shooting, whilst the MIDAS® Sensor, is permanently installed on critical and high value applications, providing continuous and real-time condition monitoring, leading to predictive maintenance planning.

Sensor on screwed saddle

Sensor on banded saddle

By BVAA's Technical Consultant, Peter Churm

TECHNICAL HOT SPOT

Latest revision of the DNV Offshore Standard for Submarine Pipeline Systems, DNV-OS-F101

The third revision of the DNV Offshore Standard for Submarine Pipeline Systems, DNV-OS-F101, is now available providing significant improvements based on solid feedback from the industry. Close to 1,000 comments were received during the consultation process.

The trigger for the revision has been to align the standard with the new ISO 3183 on linepipe and the new ISO coating standards. In addition, DNV has gained experience and received considerable feedback from the industry and wished to incorporate this into the standard.

Three main changes

Although there are significant improvements in the new revision, most of these involve restructuring and clarifications. The three main changes are as follows:

Firstly, the concept development and design premises section has been reorganised into a more chronological order. The part on pressure control systems has been slightly restructured and generalised – restructured in the sense that pressures are defined and generalised in that the control system is no longer limited to pressure alone but has been extended to all critical operational parameters, such as temperature, content and minimum temperature, content and minimum pressure, and the term operating envelope has been introduced for this purpose.

The second main change is in the installation section, which is now termed *"Construction – Offshore"* as it includes pre-installation as well as post-installation (e.g. pre-commissioning) activities. This is based on several workshops with Statoil and the section is now more balanced with respect to the extent of the activities and is organised in chronological order. In addition to the reorganisation, de facto changes in this section relate to marine operations and equipment qualification.

The third main change relates to non-destructive testing (NDT) and automated ultrasonic testing (AUT). As this has been a less mature area in terms of technology compared to other parts, the experience gained over the last five years and from the new DNV-RP-F118 on the qualification of AUT systems was expected to necessitate some updates.

Schubert & Salzer perfect for tyres

Production plants for tyres place extremely high demands on valves

Tyre curing presses work at high pressures of steam, water, and nitrogen, as well as at high temperatures. In addition, the very short processing cycles require extremely robust valves for very high cycles, so that good operating efficiency is achieved with the service live being as long as possible.

In the Continental plant in Púchov, Slovakia, angle seat valves and sliding gate valves from Schubert & Salzer Control Systems have proven particularly suitable for these operating conditions. Continental, a worldwide leading tyre manufacturer with numerous production facilities, has used Schubert & Salzer valves for years at its plant in Púchov.

A large number (that grew every year) of different valves of various manufacturers had been used in the past in the curing installations at this site. This led to increasingly bigger problems in terms of maintenance and spare parts procurement. Starting in 1999, these systems began to be retrofitted uniformly to Schubert & Salzer technology, in order to, above all:

- optimise the control accuracy,
- extend the service lives under the harsh operating conditions,
- simplify the maintenance,
- reduce the range of models,
- and also reduce the processing-heat waste.

Space-saving valve construction

Initially, angle seat valves of Type 7010 were used in a special high-temperature design with threaded Great Prospects for Tyre Curing Presses connections. The special advantage of 7010 angle seat valves is the high wear resistance. Due to the rapid wear of the seating seal, the ball valves previously used for this purpose regularly led to leakage and required maintenance after one to two months. The construction of the 7010 angle seat valves allows self-cleaning of the valve seat. This is very important under the critical conditions of vulcanisation with deposits and corrosion in the pipeline. The 7010 valves from Schubert & Salzer operate at the same place without problems for 2- 3 years without leakage.

Relative to other seat valves, angle seat valves save space due to their angled design to the pipeline and the very compact actuators. Compared with traditional globe valves, angle seat valves have high Kvs values with relatively small dimensions. These dimensions make handling of the valve easier and result in a reduced weight for the entire valve.

In the course of the Continental development, the flange connections of the angle seat valves were replaced by a welding connections which significantly reduced the joining expense and the weight of the valve. Also, the risk of leakage at the connection got eliminated. Even with a welded

design, the maintenance remains simple, because for maintenance one can simply unscrew the actuator from the valve, the body does not have to be removed from the pipe.

This construction can be easily insulated, which significantly reduces the heat losses at the valve. With the single acting actuators used here, the number of control air supply lines is also reduced; the safety of the press systems is increased in the event of the loss of control or power.

After the very good experiences with the angle seat valves, Continental also decided to convert the curing installations from hot water to steam based on Schubert & Salzer technology. Instead of an inlet pressure of 3 bar, the valves must now also be able to handle 17 bar. Sliding gate valves are best suited for this purpose, because they can be used simultaneously in both areas of application.

Less wear in all operating situations

The heart of the sliding gate valve is composed of two slotted disks that slide one on top of the other and are sealed relative to each other. A sealing plate fixed in the housing perpendicular to the direction of flow has a defined number of transverse slots of the same size. A rotationally fixed disk with the same arrangement of slots is moved vertically and thus changes the flow cross-section. The subsequent pressure difference presses the moving disk onto the fixed disk. The sliding gate valve thus forms a seal without any metallic seat. This functional principle also causes a self-lapping action of the moving sealing disk. This area seal is thus considerably less susceptible to faults than a ring seal typically used in globe valves. This design achieves leakage rates of < 0.0001% of the Kvs value.

For a good long-term sealing, there is another systemdependent advantage of sliding gate valves that has an effect on an economical service life. The maximum control stroke of the sliding gate valve is only 8 mm. This short stroke length provides not only short actuation paths and switching times, but the packing and actuators are also operated very gently due to the short stroke length. In the case of sliding gate valves, both are subject to significantly less stress, so that these also have considerably longer service lives.

In the event of maintenance, all common valves require the disassembly of the entire valve housing, in order to reach the seating elements. And this requires, by experience, the help of at least two workers. This is not the case for sliding gate valves. The throttling element can be disassembled and serviced by a single person on site in the plant. After disassembly of the valve, only four cover screws have to be loosened and then the functional unit can be pressed out and replaced.

In curing installations, the following properties of sliding gate control valves have proven extremely advantageous:

- very long service lives, that exceed those of globe control valves by up to seven times,
- for every operating requirement in the system, the valve can be optimised with a corresponding Kvs value, which requires merely the simple replacement of the fixed disk,
- the optimised Kvs value significantly extends the service life of the valve,
- the high control accuracy of the sliding gate valve allows a shortening of the press cycles resulting in increased productivity,
- simple and quick maintenance of the valve by replacing the easily accessible disk pair.

Angle seat valves and sliding gate valves on duty at Continental in Púchov.

For these reasons, step by step all of the valves in this plant have been standardised to Schubert & Salzer. Currently, over 1700 angle seat valves of Type 7010 and approximately 800 control valves of Type 7020 and sliding gate valves of Type 8043 are in use at this plant. Schubert & Salzer valves offer excellent advantages for Continental especially under the aspects of cost minimisation for plant management, maintenance, and service.

Rotork announces the next generation of gas-over-oil pipeline valve actuators – the Rotork GO Range

The robust GO Range now provides a more compact and reliable solution for automating heavy duty valve applications found in the gathering, transmission, compression and storage of gas.

Re-designed to provide longer and more efficient service in the harshest of environments with the minimum of maintenance, the new generation of Rotork GO actuators has undergone an important upgrade, including streamlined manufacturing and product improvements. As a result GO actuators are now lighter, more compact and incorporate advanced changes to functional specifications. The improved modular design enables the smallest number of components to meet a wide variety of valve torque and control requirements.

The GO range uses the pipeline gas as the motive power source. The gas is delivered to oil tanks that convert the gas into hydraulic pressure and this pressurised hydraulic oil is used to drive industry-preferred Rotork scotch-yoke quarter-turn or linear valve actuators. A complete range of sizes is now available to suit virtually any valve size or class.

Using pressurised oil as the driving force provides powerful and smooth actuator control and isolates the cylinder from the pipeline gas. This prevents contaminants from entering the hydraulic cylinder, eliminating corrosion and seal deterioration and extending actuator life.

At the centre of the gas-over-oil system, the multi-function manifold block integrates gas control functions to facilitate a wide range of valve control options. Standard gas control systems are complemented with optional equipment designed by Rotork Fluid Systems for functions including Line Break, Low Pressure Close, High Differential Inhibit and Emergency Shutdown (ESD). In all cases operation is simple and intuitive.

A dedicated pump is utilised in each operating direction to prevent leaking or contamination between the gas-over-oil tanks. The manifold has the facility for a high-flow hand pump, pressure relief and a locking handle for safe commissioning. High pressure and low pressure control logic designs are also available, together with torque limiting devices for valve and drive train protection.

The actuators are IP66M/67M third party certified and approved for environmental protection, together with CE and ATEX hazardous area certification. The standard working operating pressure range is 10 to 105 barg, enabling a quarter-turn operating torque of up to 600,000 Nm and linear thrust of 5,000,000 N to suit pipeline valves of virtually all sizes and description. Higher torque and thrust outputs can also be provided for.

As with all of Rotork's flow control products, GO actuators are fully supported by a global service network of over 350 local offices and agents.

Fugitive Emissions Test ISO 15848-1

The innovative Hobbs Valve TVT range of Triple Offset Butterfly Valves has successfully passed the Fugitive Emissions test requirements of International Standard ISO 15848-1:2006.

At Hobbs Valve we are supremely confident in the quality and performance of our products, which is why we choose for the tests to be performed away from our manufacturing facility at third party premises in Houston, TX under the watchful eye of DET NORSKE VERITAS (DNV).

The selection of a Class 300 valve required an ambient test pressure to be maintained at 740 psig (51.02 bar) and a 200°C test pressure at 635 psig (43.78 bar) with a pressure variance of +/-10 psig. Utilising Helium as the test medium the valve withstood 4 thermal phases of temperature up to 200°C whilst being operated up to 2500 cycles.

Test results certified by DNV indicated exceptional performance; there was no re-adjustment to the packing torque throughout the duration of 3 day test.

Hobbs Valve
Tel: 029 2086 1099
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HOBBS VALVE

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 in Muellheim, Germany. AUMA is represented in 35 countries and employs over 2,000 people worldwide.

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.

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Messe Düsseldorf ®

Big Business for Quickits Limited

Quickits Limited has long been established as the 'Best in Class' when it comes to the valve and actuator mounting kit manufacturing industry. With the recent, new additions to the CNC fleet of machinery the management team at Quickits have taken this to a whole new level.

The all new XYZ 1100XL lathe with its colossal 1000mm diameter chuck is capable of turning drive couplings and flanges up to 1100mm in diameter, more than enough to cover the most demanding of requirements.

Housed in the new production facility along side the 1100XL sits the brand new XYZ 1510 Vertical Machining Centre with a machining bed large enough to handle valve / actuator mounting kits with PCD's up to F60.
Commenting on the goliath sized machines Mick Durkin, Quickits Sales Manager said, *"The recent investment in new CNC machinery is without a doubt the largest, single investment that Quickits has made to date. With this and the additional investments in stock raw materials to cover spool piece type mounting kits accommodating F60 size PCD's it is fantastic for the business. Quickits' ability to quote lead times of days rather than weeks for mounting kits of this size is somewhat unique to the industry. Unlike the competition we design and manufacture everything in house which means that we are no longer reliant on third party sub-contract companies and this level of control is evident from our quality and delivery performance."*

Enclosed type spools to suit 30" valve with F40 PCD on VMC1510

Quickits Limited has an enviable reputation for quality and service and with future investment plans in place there is no doubt that the company will further strengthen its position within the industry.

Further Solid Investment

Quickits are also increasing their engineering design capabilities with the introduction of Solid-works CADCAM software.

This recent investment will enable the design team at Quickits to offer enhanced services to the customer including 3D modelling with live simulation.

Drive coupling to suit 40" Trunnion ball valve on XL1100.

Engineering Manager, Niel Hufton said, *"The decision to introduce Solidworks was driven by the increased demand from our customers for detailed engineering information. This new software will allow us to simulate our designs in real time and will highlight any issues relating to interference detection, clearance verification, finite element analysis, stress calculations and torque requirements. It is also possible to link this software to our stock control system which will flag up any material shortages at the earliest possible stage. I am very much looking forward to the improvements that this investment will bring."*

Quickits Ltd
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www.quickits-online.co.uk

Score Training Unveil Widely Anticipated Compression Packing Course

Score Training and Multimedia Productions Ltd. (part of Score Group plc.) will this month deliver training in Compression Packing to external clients for the first time as they launch the newest in their range of expert engineering courses. Committed to safe operating.

The course comes following the UK HSE's decision to make all hydrocarbon releases above 1kg reportable, making gland packing leaks an essential focus for the oil and gas sector as a whole. Valve leakage is not only expensive to the industry but can be hazardous, toxic and potentially fatal. An Oil or gas leak in any process poses a massive threat to the plant, its personnel and the environment – Causing a risk of fire, oil spills or explosion and increasing the volume of harmful atmospheric releases. In order to maintain HSE compliance, adequate measures for the regulation of aggressive substances MUST be in place but ensuring a workforce possesses the know-how to maintain such practices can be a difficult and costly procedure.

Score Training have developed a solution; the one-day Compression Packing course-a unique blend of classroom based theory and practical experience-will enable candidates to control the associated risks by:

- Building an awareness of where gland packing issues may occur allowing candidates to identify problems and adopt a proactive approach to maintenance
- Training delegates in the practice of correct inspection techniques and the correct procedures for the safe installation and removal of compression gland packing
- Providing an understanding of how the gland packing function actually works
- Building an appreciation for the different packing types and the key stages to selection, inspection, and installation with a distinct focus on safety and trapped pressure awareness

Ensuring plant personnel are fully equipped with the knowledge and ability to manage possible dangers means that potentially disastrous situations are not given the opportunity to arise.

Conrad Ritchie (Chairman of STAMP) said, *'Score Training identified the immediate need to develop this course content. The reduction of hydrocarbon releases is a key focus area and is a focus area with the UK HSE. Valve leakage is not only expensive to the industry but can be hazardous toxic and potentially fatal, we will continue to do all we can to help operators reduce emissions.'*

The course is part of S.T.A.M.P's innovative Hydrocarbon Containment Management Programme™ which targets the key areas at the source of all hydrocarbon releases. The course is now also available as a stand-alone course to third party clients.

Score Group plc
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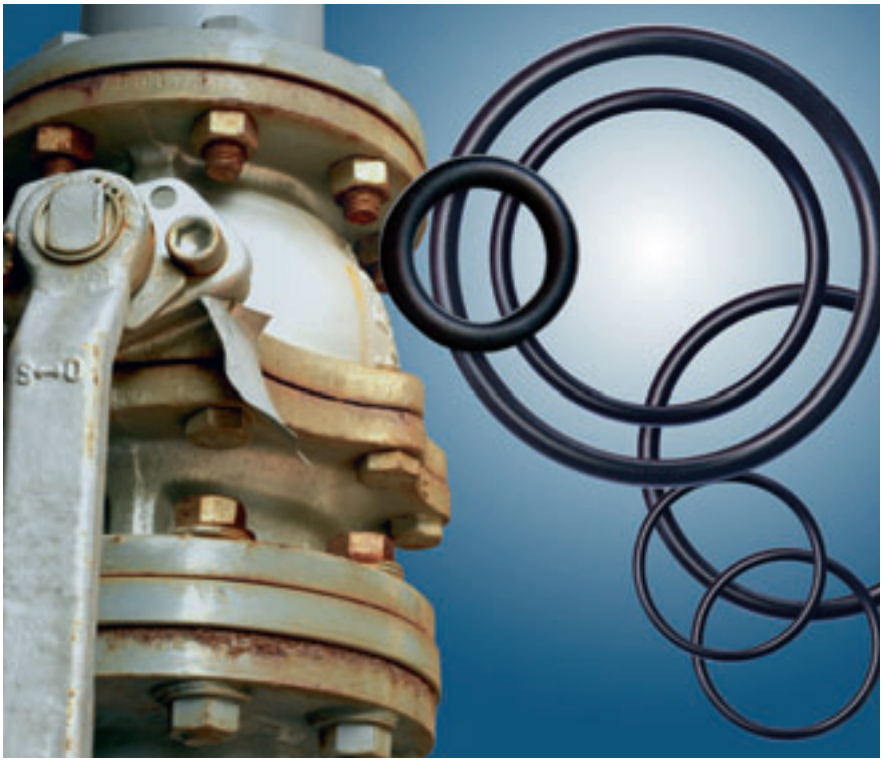
www.score-training.com

Solving Sealing Problems For Flow Control Products



Dupont™ Kalrez® Spectrum 7090 seals, available from Dichtomatik Ltd, to provide high performance sealing in control valves for a wide range of process applications.

Ball valves, utilising a drilled-through ball rotating in a retaining socket, are widely used for process line control operations within industry. Typical areas of application for these valves include oil and gas, chemical processing, power generation together with pulp and paper industries among many others.

Ball valves offer both flow throttling and full shut-off conditions, while applications can involve an extensive range of pressures, temperatures and even the use of chemically aggressive fluids. The importance of specifying the right sealing products for use within these valves becomes paramount, particularly where breakdowns or plant shutdowns caused through valve failure can be catastrophic.
The specialist sealing company, Dichtomatik Ltd, are able to provide the Kalrez® range of perfluoroelastomer 'O' rings from the Dupont™ Performance Polymers range, which have been formulated to provide superior sealing qualities for even the most difficult applications.

A recent problem application featured a trunnian mounted ball valve used in the gas cleaning/sweetening processes. This involved the removal of carbon dioxide and acidic gasses such as hydrogen sulphide from gas streams, including synthesis gas produced by the gasification of coal, coke and heavy hydrocarbon oils. Gas sweetening is commonly undertaken in refineries, petrochem plants and NG processing etc, where the process often utilises a glycol-based solvent for the acid gas removal.

The solvent chemistry, together with RGD (Rapid Gas Decompression), can attack the valve seals and 'O' rings typically located in the valve seat. This can lead to seal life reduction, premature valve leaks and higher costs for both plant operation and maintenance.

A successful solution was achieved by the fitting of DuPont™ Kalrez® Spectrum 7090 seals. These perfluoroelastomer products offer an excellent combination of chemical compatibility, with both RGD and high temperature resistance for 'O' ring applications, particularly where handling glycol-based solvents. Valve leakages can be dramatically reduced, with a reduction in maintenance procedures resulting from the extension of MTBR (Mean Time Between Repairs).

The DuPont™ Kalrez® Spectrum 7090 seals are specifically targeted for applications requiring high hardness/higher modulus properties. They have extensive mechanical properties including compression set resistance and seal force retention with good responses to both temperature cycling effects and RGD resistance. They are well suited to combined static and dynamic sealing, especially where high temperatures or extrusion resistance are involved. A continuous working temperature of 325°C (617°F) is possible, with short excursions at an even higher temperature also being acceptable.

As an authorised DuPont™ licensee, Dichtomatik are able to offer advice and full technical support on problematic applications, and call upon a wide range of both standard and purpose engineered sealing products. Where application temperatures are limited to a maximum of 250°C (482°F) then they can also supply DuPont™ Kalrez® 0090 sealing products which compared with Kalrez® 7090 offer improved RGD resistance and chemical resistance to water and hydrogen sulphide.

Extension To Blutop™ Product Range Meets Increasing Customer Demands

Iron technology leader Saint-Gobain PAM UK, part of leading materials group Saint-Gobain, has extended its Blutop™ pipe system to accommodate growing customer needs.

A smaller diameter push-fit pipe system for water distribution networks made from ductile cast iron, Blutop™ is now available in sizes of 75mm, 90mm, 110mm, 125mm and 160mm outside diameter.

Blutop™ is ideal for the majority of ground conditions, particularly contaminated land, courtesy of its patented zinc aluminium exterior coating. The product also features a high performance thermoplastic interior lining, Ductan, which provides exceptional protection against corrosion and ensures a consistently high level of water quality.

Blutop™ pipes and fittings have a simple push-fit joint, using both standard and anchor gaskets, designed to reduce installation time and remove the need for costly concrete thrust blocks. The product has been developed to last up to 100 years, ensuring Blutop™

delivers a sustainable and long-lasting water pipeline system.

Paul Hancock of Saint-Gobain PAM UK commented: *"We believe the system offers a superior solution to contractors seeking a durable and strong water pipeline for projects. Although Blutop™ has an operating pressure of up to 25 bar, it has a greater internal diameter than plastic pipes of the same diameter. Due to this increased hydraulic capacity, designers can often opt for a smaller diameter pipe. The extension to the Blutop™ range shows our commitment to meeting ever-growing customer requirements."*

SAINT-GOBAIN
PAM UK

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

By BVAA's Technical Consultant, Peter Churm

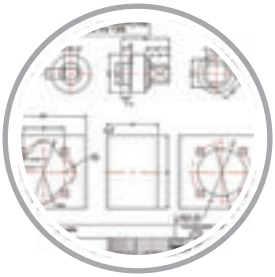
TECHNICAL HOT SPOT

EN 14341:2006 *"Industrial valves - Steel check valves"* was submitted to the CEN systematic review in 2011. Following the results of the review, CEN/TC 69 requested its secretariat to launch a resolution for the revision of EN 14341:2006. A vote on the resolution was launched among member countries.

The result of the voting is that the resolution is not approved since less than 5 countries committed themselves to participate in this revision, in which case EN 14341:2006 will have to be confirmed unchanged. In this case, its reference may be taken out of the OJEU and the standard will no longer give presumption of conformity to PED.

The final decision on this issue will be taken during the next plenary meeting of CEN/TC 69 on 12 June 2012.





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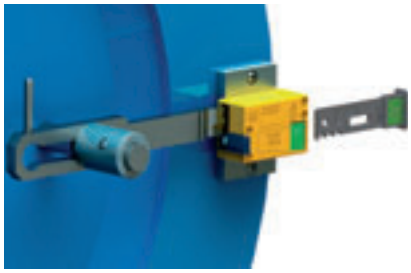
The Case for Interlocking Pig Launchers and Receivers

By Mike Fynes, Sales and Marketing Director, Smith Flow Control

Pigging operations are inherently dangerous. Opening a pig trap closure while there is pressure in the barrel can shoot the pig out of the launcher at high speeds. Attempting to pass a pig through a partially open outlet valve, or prematurely opening the pig trap in the presence of high levels of toxic H2S, can cause fatal consequences.

Written safety procedures are not enough to ensure operator safety. Mechanical key safety interlocking is the only technology that can ensure that safety standards are met by removing human error. Interlocks will not allow the pig trap door to be opened unless it is depressurised and safe to do so.

Smith Flow Control (SFC) specifically developed a coded-card key interlock system to ensure the total isolation of pig trap vessels. These key interlocks mechanically prove their 'closed and isolated' status that enables venting and draining of pig trap vessels before loading or unloading operations. These principles have been widely adopted by UK pipeline regulators, Operating Companies and integrated into international standards such as API (American Petrochemical Institute) and ASME (American Society of Mechanical Engineers).



A typical Smith Flow Control door lock fixed on a pig trap closure. The key (on the right) is inserted into the interlock to release the lock and allow the operator to open the door and load/retrieve the pig safely after all previous steps have been completed.

Operating a pig trap

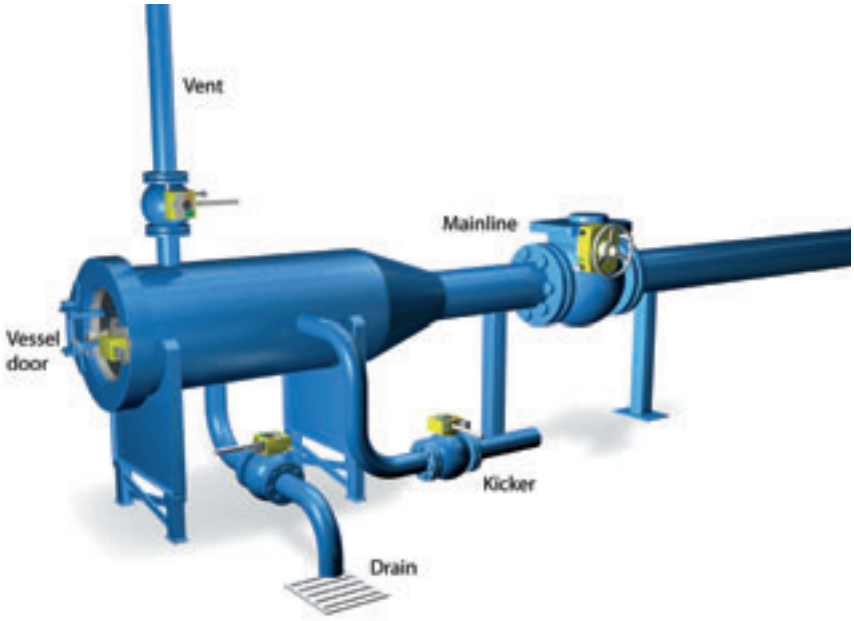
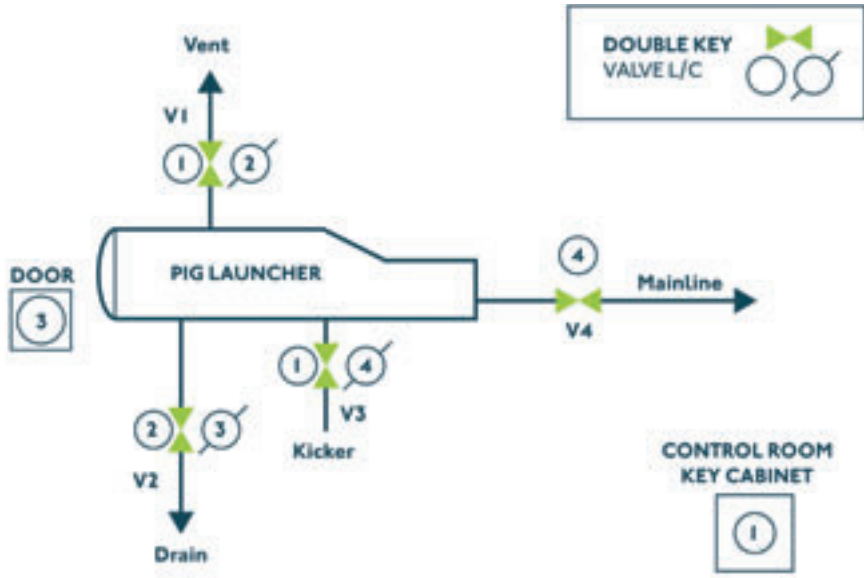


Diagram of a typical pig trap, using a Smith Flow Control interlock system in yellow.

Key interlocks regulate the entire process by releasing and trapping keys in a predetermined sequence. Operating the unlocked equipment immediately traps the initial (i.e. inserted) key; when the operation is complete, a secondary (previously trapped) key may then be released thereby locking the equipment in the new position. This secondary key will be coded in common with the next lock (item of equipment) in the sequence. By this simple coded key transfer principle a 'mechanical logic' system is created which denies any scope for operator error.

Here is the process in full:



Pig Loading

SFC interlocks can be customised depending on the application but in a basic scenario there are a few simple steps to launch a pig safely using interlocks. Each step traps a key and releases a key and keys are only released in order.

Keys are used to unlock and open the vent and drain valve respectively. These actions release a key that can then be used to open the vessel door safely and load the pig.

Once the pig is loaded and the vessel door is closed and locked, a key is released to close the drain and vent. This action releases the key that opens the kicker valve and launches the pig.

Once the pig is launched, the trap is re-isolated by closing and locking the mainline valve. This releases a sequence of keys that depressurises the trap by closing the kicker and opening the vent and drain. The final steps involve closing all valves; the final key is returned to the control room key cabinet where is it kept until the process starts again. No steps can be by-passed in this sequence, nor can steps be taken out of order.

System start condition:

- All valves are closed and locked closed.
- Vessel door closed and locked closed.
- Key 1 is located in the Control Room Key Cabinet.

1. To load pig(s)

A. Insert Key 1 into V1, unlock and open, lock open by releasing key 2.
B. Key 2 into V2, unlock and open, lock open by releasing key 3.
C. Key 3 into door lock. Unlock and open the vessel door, key 3 is retained all the time the door is unlocked and/or opened.

Load Pigs

2. To isolate, pressurise then launch.

D. Close and lock closed the vessel door, key 3 is released.
E. Key 3 into V2, unlock and close, lock closed by releasing Key 2.
F. Key 2 into V1, unlock and close, lock closed by releasing Key 1.
G. Key into V3, unlock and open, lock open by releasing key 4.
H. Key 4 into V4, unlock and open.

Pig(s) Launched

3. Re-isolate after launch

I. Close lock by releasing key 4.
J. Key 4 into V3, unlock and close, lock closed by releasing key 1.

4. Depressurise trap

K. Key 1 into V1, unlock and open, lock open by releasing key 2.
L. Key 2 into V2, unlock and open, lock open by releasing key 3.
M. Key 3 into V2, unlock and close, lock closed by releasing key 2.
N. Key 2 into V1, unlock and close, lock closed by releasing key 1.

5. Back to 'dormant/start' condition

O. Key 1 is returned to the Control Room Key Cabinet.

Proposed Sequence Ends

Interlocks do not reduce productivity. The key transfer system is integrated with the operation to create a seamless sequence of events that ensures safety and peace of mind.

SFC's valve interlocks are mechanical. They do not rely on a power supply. They can be fitted to motorised valves without compromising the valve's function and failsafe features. As a result, key interlocks provide independent control over the working of manually operated valves, end closures and motorised valves. In practice, this simple concept saves lives and protects plant and personnel during pigging operations worldwide.

Smith Flow Control (www.smithflowcontrol.com) is a leading supplier of valve interlocking systems for the oil and gas and chemical processing industries worldwide. SFC was established in 1985, and by 1990 became the generic term for key interlock safety systems in the international Oil & Gas industry; its client base now includes most of the major operating companies in all five continents. SFC offers bespoke solutions to customers with specialised requirements and in 25 years Smith Flow Control has never failed to provide a viable technical solution to a client's safety operating problem.

Smith Flow Control Ltd
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Steam systems efficiency optimised by control elements

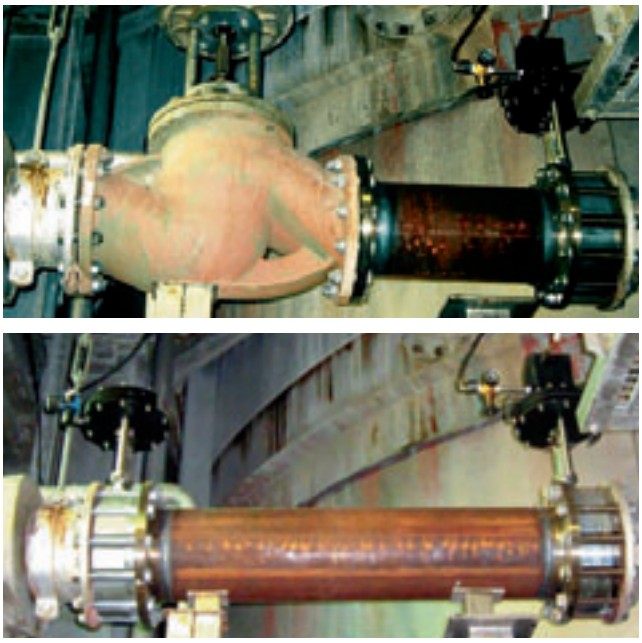
Eichbaum Brewery replaces boiler room seat valves with Schubert & Salzer sliding gate valves

When traditional valves with a metal seat are used to shut off and restrict steam, they are highly susceptible to scoring. Inevitably this leads to costly and even dangerous leakages of steam. This was one of the reasons why the Eichbaum Brewery, one of the largest and most productive breweries in Baden-Württemberg, has placed its faith in sliding gate valves in modernisation measures undertaken since 2007. This has involved progressively replacing its defective globe-type valves, used up to that time, with sliding gate valves, since the latter valves provide a seal without a metal seat and therefore offer significant advantages - not just in steam systems.

Even less wear with a short stroke

In the sliding gate valve principle, with surface seal between the plates in the throttling element, the pressure of the medium against the movable valve plate boosts the sealing function of the valve. This operating principle also provides for a self-lapping action by the movable valve plate. The result of this is that the surface sealing system is significantly less susceptible than a conventional ring seal in a globe-type valve. As a result, leakage rates of less than 0.0001 % of the Kvs value are achieved.

In addition to a highly effective permanent seal, the sliding gate valve offers a further benefit inherent in its system which affects its effective working life. The control stroke of the sliding gate valve is a mere 8 mm at most. This short stroke results not only in short operating paths and times, but also significantly reduces the stresses on both the packing as well as on any actuator operating it. In a sliding gate valve, both are subject to much lower loads which is reflected in substantially longer working lives for both.



Before and after

No problems at all in exchanges

A sliding gate valve is extremely narrow in construction and fits easily between two flanges. A DN 150 sliding gate valve (including actuator) weighs a mere 14.2 kg, so that it can be fitted and removed by a single person, and, therefore, can also be maintained. The compact construction and therefore the significantly smaller amount of space required for the sliding gate valve were key decision criteria for Eichbaum in placing their reliance on these valves for the mash house and the filter cellar. Thus, this ease of handling the sliding gate valve was a decisive and cost-reducing benefit not only for installation but also for maintenance.

When any conventional valve requires maintenance, the complete valve body has to be dismantled to gain access to the seating elements. And, as a rule, this involves two workers. This is not the case with the sliding gate valve. One person only is needed to remove and maintain the throttling element on site in the plant. In the standard version of the sliding gate valve, after removing the valve, a single screw is unscrewed to access the operating unit, which can then be pressed out and exchanged.

In contrast to the traditional globe-type valve, since its throttling elements are designed to be perpendicular to the flow, the sliding gate valve needs barely a tenth of the force for positioning and closing. The comparatively low force requirement not only means significantly lower energy consumption, but also provides for smaller valves and smaller valve actuators - which is therefore clearly evident in volume and weight.

The Eichbaum Brewery is now using type 8021 sliding gate valves in sizes DN 80 to DN 200 in its main steam supply circuit. The DN 200 versions are used, for example, to control the amount of pressure up to 16 bar differential pressure at the boiler, serving as fastacting shut-off valves as a safety measure in power failures, or, in traditional fashion, to control the amount of steam pressure.

Variable Kvs values for a secure future

It is a simple matter in a sliding gate valve to manipulate both the characteristic curve of the valve as well as the flow factors (Kvs value) in almost any manner. As a result, the sliding gate valve can be adapted easily to widely differing flow volumes.

All that is needed is an appropriate form of the slit profile in the sliding plates adapted to almost any conceivable shape. In this way, it is possible, for instance, to produce equal-percentage characteristics (exponential).The basic characteristic curve where the slits in the valve plates are straight (long holes) shows that the valve characteristics are similar to the valve characteristics of rotary plug valves, which can be designated as *"modified linear."*

Kvs value reductions within a nominal size are also simple to achieve by reducing the open slit areas. As a consequence, just by exchanging the operating element, the Kvs value can be modified at any time retroactively (Kvs values from 0.04 to 910 can be attained in all nominal sizes). This means that the Eichbaum Brewery can react flexibly and without incurring high investment costs to changes in the quantities of steam required.

Sliding gate valves are produced in sizes DN 15 to DN 250 for pressures up to PN 100 and median temperatures from - 200°C to + 530°C. The wide range of materials and different positioners offer applications in the chemical, textile and pharmaceutical industries, steel works and many other sectors.

The compact construction and therefore the significantly smaller amount of space required for the sliding gate valve were key decision criteria for Eichbaum in placing their reliance on these valves for the mash house and the filter cellar.

The perforated plates sliding against each other form the main throttling element in sliding gate valves. Since metal seats can be dispensed with in this system, scoring is eliminated which, in conventional valves, results very rapidly in expensive leaking.

Spirax Sarco White Paper analyses cost benefits of condensate recovery in steam systems

A new White Paper from Spirax Sarco shows how steam users can save tens of thousands of pounds by improving their condensate recovery systems.

Condensate, the hot, treated water produced as steam releases its heat energy, is a valuable resource that contains up to 20% of the useful energy in the original steam. Recovering this energy can reduce fuel bills, cut water and effluent charges and lower spending on water treatment chemicals.

The White Paper describes the technology involved in recovering this vital resource, including steam traps, pumping technologies, boiler blowdown, flash steam and its recovery, and the issues involved in pressurised low loss condensate recovery.

Case studies demonstrate how real steam users have benefitted from these technologies in practice, showing the significant savings they have achieved. Spirax Sarco offers a full portfolio of the latest condensate recovery systems that help steam users reduce their utility bills and optimise their systems. The White Paper outlines these as well as giving advice on the financing of condensate recovery improvement projects.

The White Paper can be downloaded from the Spirax Sarco website www.spiraxsarco.com/uk/about/news/condensate_recoveryWP or is available on request in PDF format. For a copy, please email uk.enquiries@uk.spiraxsarco.com or call 01242 535319, ref: 'Condensate Recovery White Paper'.

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By BVAA's Technical Consultant, Peter Churm

TECHNICAL HOT SPOT

Helium gas shortage

It has been brought to my attention and you may already be aware, that there is a serious shortage in the supply of helium gas. This shortage is causing an increase in purchase price and even rationing of supply from some UK suppliers. Helium is a depleting natural resource and any shortage is anticipated to present major problems for science and industry in the coming decades.

A major supplier of helium in the UK said that *'the global economic slowdown has created a lull in natural gas production, from which helium is a by-product, and is causing demand to outstrip supply with new capacity coming online very slowly'*. For some time, artificially cheap stores of helium from the US have been filling the needs of users at low prices but that buffer from the vagaries of the market is coming to an end.

BVAA have been lobbying Vince Cable the *'Secretary of State for Business Innovation and Skills'* on this issue, who is not likely to solve the problem, but we need Government awareness of the concerns from the British valve manufacturing industry, and that they be proactive on our behalf to ensure we are not disadvantaged in any way, for example by any one nation hoarding helium for its own use. Lobbying your local PM on this problem will ensure that the issue remains 'live and kicking'.

In the short term we look like having to live with rising prices and occasional tightness of supply with rationing, or identify and gain approval for the use of an alternative gas for valve testing.

Valvekits launches new website

Under the slogan *'Everything for the valve industry except valves and actuators'*, the new website describes Valvekits' abilities to supply a vast array of valve and actuator related products.

These include mounting kits, extension stems, locking devices, worm gears, bevel gears, accessory mounting brackets, linkages and panels for the fitting of filter regulators, positioners and solenoids.

Manufactured products are all designed to customers' specific requirements in a large range of materials. All designs are produced in house by a highly trained design team and backed up with calculations to give peace of mind to the customer.

Valvekits manufactures all valve and actuator mounting kits to the same exacting standards as laid down in BS ISO 9001:2008. The latest CNC milling machines and lathes are used and a continuous investment plan for new machinery keeps the company at the forefront of technology. The new website can be viewed at www.valvekits.co.uk

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Full steam ahead for Valveforce's High Pressure Valves at AD and biofuel plants

Steam system and flow control specialists Valveforce have launched a new range of High Pressure Two-Way Pneumatic and Electric Control Valves, designed to help maximise efficient operation of the energy centre at biogas and biofuel plants.

Valveforce, who can design, build and test to create high quality bespoke valve systems, as well as provide off-the-shelf solutions, have also ensured that these new High Pressure Valves provide safe control in AD environments.

Designed in a straight through globe style with precision cast bodies for maximum capacity, Valveforce's High Pressure Valves can handle a wide range of fluids found at renewable energy and fuel plants, including water, thermal oil, steam, nitrogen and natural gases. For quick change and ease of maintenance, these new valves are in optimised modular construction and benefit from a large range of actuators to overcome numerous AD/biofuel applications.

In addition to its High Pressure Two-Way Pneumatic and Electric Valves, Valveforce also supply Mixing and Diverting Valves, as well as Severe Duty Valves for biogas and biofuel applications.

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By BVAA's Technical Consultant, Peter Churm

TECHNICAL HOT SPOT

BS ISO 6552:1980 Automatic steam traps — Definition of technical terms

This British standard was published on 31 May 2012 and is the UK implementation of ISO 6552:1980, incorporating corrigendum July 2009. It supersedes BS 6023:1981 (dual numbered as BS 6023:1981 / ISO 6552:1980), which is withdrawn.

In the July 2009 corrigendum the table in Sub-clause 2.3 was amended, and the title aligned with the ISO title.

BSI Technical committee PSE/18/1 *"Industrial valves, steam traps, actuators and safety devices against excessive pressure"* was involved in its preparation.

One-size-fits-all digital positioner from ABB

Adapts at the push of a button

The new PositionMaster EDP300 digital positioner from ABB offers a single control solution to suit any control valve with an air-driven actuator. The new unit features built-in intelligence that enables it to adapt to different valves at the push of a button.

Designed for flexible mounting, the EDP300 can control linear or rotary actuators in the same footprint as the previous ABB TZIDC positioner. An optional stainless steel housing means it can be used in corrosive environments, so it's suitable for tough applications in industries such as chemicals and offshore oil and gas.

The one-size-fits all nature of the EDP300 means that users only need to stock one type of spare to satisfy any positioner failure.

ABB's human machine interface (HMI) offers time-saving menu-driven programming and control options, while on-board diagnostics support optional pressure sensors to monitor actuator performance in real time for predictive maintenance and improved reliability. Up to five valve signatures can be saved in the device, which can be compared so that valve diagnostics can be performed for the purpose of preventive maintenance. Other innovative features include partial stroke testing, which is used to check the function of ESD (emergency shutdown) valves.

The positioner also includes the options of fast travel in applications with low pressure changes, and slow travel where it's needed to avoid potentially dangerous occurrences such as water hammer.

The heart of the PositionMaster is its powerful pneumatics. Compressed air is generally 10 times more expensive than electricity and the new positioner needs only 0.03kg/h of compressed air to keep it in steady state. This makes it extremely cost-effective to run.

The new positioner is flexible enough to handle air supply pressures ranging from 1.4 bar (20 psi) to 10 bar (140 psi) and overload-proofing of 12 bar (170 psi). This eliminates the need for a separate pressure regulator and simplifies the overall control loop, which reduces the chances of failure and improves availability. The positioner's air capacity ranges from 5 mg up to 50 kg/h, enabling the EDP300 to work with very small actuators, as well as high-volume models

without installing separate volume boosters. Higher air volumes mean more moving power, higher speed and increased force or torque.

Air, nitrogen or natural gas can all be used to power the PositionMaster.

The DTM (Device Type Manager) for the PositionMaster EDP300 is based on FDT/DTM technology (FDT 1.2/1.2.1) and can be either integrated into a control system or loaded on a PC with DAT200 Asset Vision Basic. This allows work to be completed in the same user interface in the commissioning phase, during operation, and for service tasks involving monitoring the device, setting parameters, and reading out data.

Communication is via 4~20mA and HART protocol. Reading data out from the device has no effect on active operation. Configuration can be carried out with ABB's new DHH805 hand terminal, certified for use in hazardous areas and with 80 hours of continuous battery life. Newly set parameters are saved in the non-volatile memory directly upon download to the device, and become active immediately. Certification is provided for ATEX, IECEx, as well as SIL 2 applications.

For more information on the PositionMaster EDP 300 email moreinstrumentation@gb.abb.com or call 0870 600 6122 ref: 'EDP300'.

ABB Measurement Products
Tel: 01925 741111
www.abb.co.uk

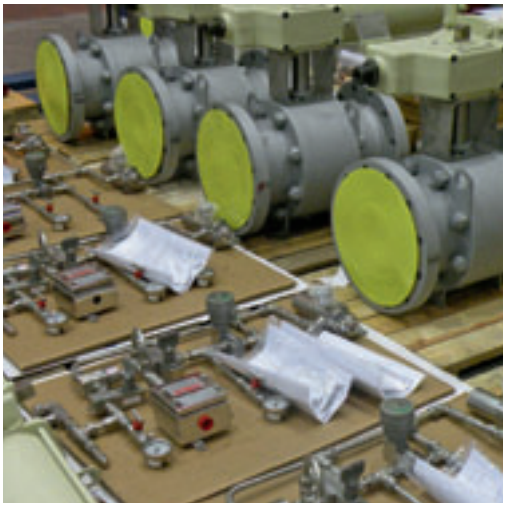
Fast Moving Year for Econosto UK Culminates in New Distributor Agreement

Econosto UK approaches the end of 2012 celebrating some significant achievements.

Most recently the company has announced its appointment as the official UK and Ireland distributor for a new Gas Sampling valve developed by renowned Swiss manufacturer FAMAT.

The valve has the benefit of triple certification - Fire Safe to API 607, ATEX approval and ISO 15848-1 2006 Fugitive Emissions qualification. It is designed for high temperature and high pressure applications to 300°C and 250 bar (Class 1500) respectively, with options for special alloys and for temperatures up to 530°C. Typical applications would be use in fine chemical plants for liquid or gas with or without suspended solids and for abrasive service.

This valve joins the Econosto stable along with the other new product additions in 2012. The Smith forged steel gate, globe and check valves arrived to the warehouses early in the year and our the new Econ brand and AMG actuators arrived in stock. The actuators will be stocked to support the Automation Centre in Leicester, which also got underway this year and has already seen some significant orders including valves, actuators and control assemblies destined for the gas processing plant serving the Laggan Tormore field in the Shetland Isles.



By BVAA's Technical Consultant, Peter Churm

TECHNICAL HOT SPOT

Parts of BS EN 60079

Explosive atmospheres Part 0: Equipment — General requirements

This British standard was published in September 2012. It is the UK implementation of EN 60079-0:2012 and is derived from IEC 60079-0:2011. It supersedes BS EN 60079-0:2009, which is withdrawn.

The significant changes with respect to EN 60079-0:2009, are contained in Annex ZY

Annexes which are additional to those in IEC 60079-0:2011 are prefixed *"Z"*.

Explosive atmospheres Part 11: Equipment protection by intrinsic safety *"i"*

Incorporating corrigendum January 2012

This British Standard has been published and is the UK implementation of EN 60079-11:2012. It is identical to IEC 60079-11:2011, incorporating corrigendum January 2012. It supersedes EN 60079-11:2007, EN 61241-11:2006 and partially supersedes EN 60079-27:2008.

This sixth edition constitutes a technical revision of these publications and the significant changes with respect to the previous editions are listed below:

- Inclusion of non-edition specific references to IEC 60079-0.
- The merging of the apparatus requirements for FISCO from IEC 60079-27.
- The merging of the requirements for combustible dust atmospheres from IEC 61241-11.
- Clarification of the requirements for accessories connected to intrinsically safe apparatus; such as chargers and data loggers.
- Addition of new test requirements for opto-isolators.
- Introduction of Annex H about ignition testing of semiconductor limiting power supply circuits
- Inclusion of non-edition specific references to EN 60079-11
- Addition of new test requirements for optoisolators
- Clarification of the requirements for accessories connected to intrinsically safe apparatus such as chargers and data loggers.
- The merging of the apparatus requirements for FISCO from EN 60079-27
- The merging of the requirements for combustible dust atmospheres from EN 61241-11
- Inclusion of non-edition specific references to EN 60079-11

Copies of this revised standard are available from BSI.

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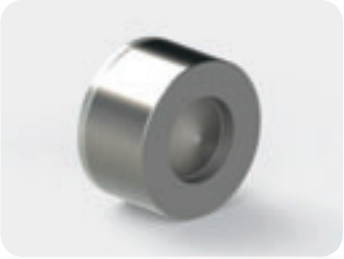

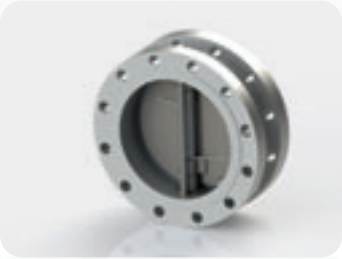

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Leengate - The Distributor's Distributor

Leengate Valves, the UK's market leading valve wholesaler, is pleased to announce our brand new priced catalogue – with over 140 new products and extended ranges. If you require a copy or would like to enquire about unbranded copies, please email kirsty.macalister@boc.com.

With the addition of our new warehouse and expanded actuation department, we can now offer comprehensive stocks from leading valve manufacturers at competitive prices, including stock of butterfly valves up to 600mm.

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By BVAA's Technical Consultant, Peter Churm

TECHNICAL HOT SPOT

Fugitive Emissions

Result of the NWIP ballot for the revision of ISO 15848-1:2006 and ISO 15848-2:2006.

- Approval for the addition of ISO/NP 15848-1 and -2 to the ISO/TC 153/SC 1 programme of work;
- Disapproval for the submission of ISO/CD 15848-1 and -2 to DIS vote without comment

The issues under consideration for revision in…
ISO 15848-1:2006 *"Industrial valves - Measurement, test and qualification procedures for fugitive emissions - Part 1: Classification system and qualification procedures for type testing of valves"* are more onerous than those contained in the Part 2: *"Production acceptance test of valves"*

As such the changes contained in the amendments already proposed have not been accepted for submission of ISO/CD 15848-1 to DIS vote. The result of voting now requires that ISO/NP 15848-1 be subject to a revision process by ISO/TC153/SC1/WG10 (which may take a maximum duration of 36 months).

ISO/NP 15848-2 may be added to ISO/TC153/SC1/WG10 work programme and as already amended may be submitted to DIS vote without comments.

Many technical comments have been received on ISO 15848-1 and these comments will were to be considered at a meeting of ISO/TC153/SC1/WG10 called for 12/13 September 2012. UK/BVAA delegates attended this meeting.

Becoming the next big thing in engineering: Brunel University students win this year's Engineering Insight prize

Final year students get hands on with design brief from Midland ACS, a Xylem brand

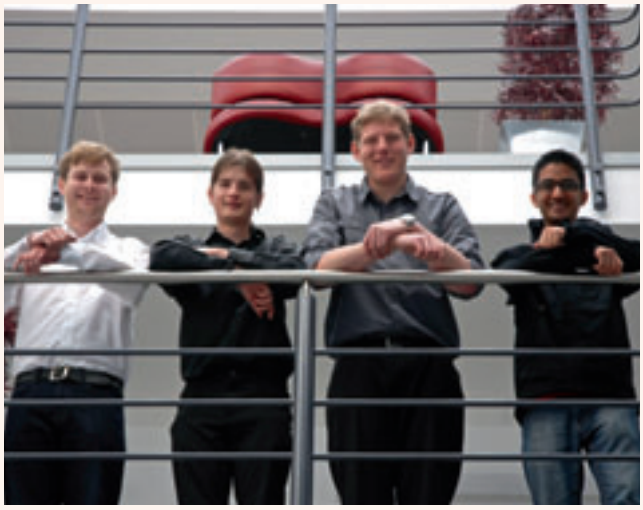
Four final year B.Eng students at Brunel University took on a design brief from leading global water technology provider Xylem in a new initiative aimed at promoting closer links between industry and academic institutions. Xylem's Engineering Insight programme engages with mechanical engineering students studying at renowned iMechE accredited institutions, providing them with real world design engineering experience using products from Xylem's global brand portfolio and based on actual scenarios. The EI Engineering Award is given for a group project and there is also a prize for an outstanding individual student. All participating students receive a copy of Engineering Formulas by Kurt Geick.

Project criteria for the group EI Engineering Award is set by Xylem Flow Control's engineering department and the best submission selected by Xylem engineers. Two teams of Brunel students elected to work on the challenge Xylem presented for their final year 3-month project. The brief from Roger Bartlett, Head of UK Engineering at Xylem's Flow Control business, was to design and develop a device to act as a safety mechanism to protect downstream equipment on oil rigs within a target production cost of £70 per unit. The winning team was judged to have analysed the brief to come up with a practical product specification, applied engineering CAD software tools in the most effective manner and utilized existing manufacturing techniques to meet all the criteria within budget.

Dr Alasdair Cairns, Senior Lecturer, Brunel School of Engineering and Design comments: *"Working on a project as a team is how our students will be expected to work in industry. Partnerships such as Engineering Insight are extremely valuable to Brunel and other academic institutions as they bridge the gap between theory and practice and help students with their job search after graduating."*

Roger Bartlett added: *"The winners demonstrated outstanding depth of skills and commitment throughout, including generating several concepts at the start of the project and selecting a pragmatic design which integrated the functions of two valves in a production-viable manner. The team's reporting and adherence to budget were also excellent."*

At the prize giving ceremony held at Brunel University, Alistair Jay, Andrew Smith, Mihir Meetarbhan and Robert Ludeks were congratulated by Professor H. Zhao, Head of the Mechanical Engineering Department,



From left to right: Alistair Jay, Robert Ludeks, Andrew Smith and Mihir Meetarbhan

Dr Cairns and Dr. Ian Gilchrist, Lecturer at Brunel. Andy Sealey of Xylem presented the winners with engraved green crystal trophies, a Samsung Galaxy tablet with case, the latest Kindle e-reader and engraved Parker pens.

The students stated that they had enjoyed brainstorming ideas and valued the feedback from Xylem's engineers. All are looking forward to taking their first steps into industry. Alistair Jay has accepted a position with a company in Sussex as a graduate engineer. Andrew would like to work on engine development in motorsport and Robert Ludeks and Mihir are looking for employment in the power, oil or renewable energy industries.

About Engineering Insight

Engineering Insight is a scheme set up to work with university mechanical engineering students with different projects at each academic institution. Its aim is provide real world design experience to enhance employability and encourage successful learning in mathematics, science and engineering.

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Scottish Energy Minister puts CVS on the spot

In August, Scottish Minister for Energy, Enterprise and Tourism, Fergus Ewing (pictured right) visited Mick Beavers, Managing Director of Control Valve Solutions Ltd (CVS) at the company's new 2,500m² Portlethen facility on the Badentoy Business Park.

CVS was the first company that the Minister visited as part of a two day tour of SMEs based throughout Aberdeenshire. He wanted to put companies under the spotlight who have been supported by Scottish Enterprise and find out more about how successful they have been and how this success can continue to create and protect Scottish jobs. The Energy Minister was accompanied by David Rennie, Oil & Gas Director at Scottish Enterprise who had a tour and discussions with the team at CVS.

One of Aberdeen's leading valve repair, maintenance and management companies, CVS, was specifically selected by the Growth Team at Scottish Enterprise for a visit by Energy Minister Fergus Ewing to find out more about how the company has grown so rapidly over the last three and a half years. CVS' growth has been phenomenal with company turnover increasing from just under £360k in 2009 and is on target to break the £2 million turnover mark by the end of 2012.

With employee numbers set to increase to over 30 in the next three years, only last month CVS relocated to its new flagship facility because it had outgrown its old Links Street workshop. Throughout the company's journey Scottish Enterprise has played its part by providing a range of business support from strategic workshops through to grants for HSEQ and job creation.

The Minister met with the key management team where there was a round table discussion with CVS' views on working with Scottish Enterprise and what difference this work has made in facing challenges and overcoming the barriers to growth. Following this meeting facility tour took place which gave the minister an opportunity to see first hand how the company repairs and overhauls valves and other equipment.

Mick Beavers said *"It was a complete surprise when I was told that CVS had been chosen for a visit and so soon after our big move but the team at Scottish Enterprise has always been very supportive. External help has been one of the keys to our success providing focus and allowing our management team to think more strategically. It would have been all too easy to get embroiled in our day to day activities and not focus on growth".*

In response to the Minister's questions on business challenges Mick pointed out a few issues relating to the constant battle of correctly financing growth, finding and retaining the right calibre of staff to achieve the high standards that clients expect from CVS and getting more exposure for CVS within the region and across the valve industry. David Rennie confirmed that CVS is already planning financial and marketing reviews through the growth team at Scottish Enterprise and these reviews will underpin the projected growth in the business.

David Rennie said *"What was evident throughout the visit and what has always stood out for me at CVS is the passion and drive to ensure that clients have the absolute highest standard of service 24/7 to reduce platform downtime and improve safety. It's the "yes we can" attitude that speaks volumes at CVS and this is one of the main reasons why they are where they are today whether it is about repairing a valve or bringing in outside help."*

The Energy Minister said: *"It was refreshing meeting a business owner who has accepted the support of Scottish Enterprise with open arms and I would urge any other business owners who are ambitious about growing their businesses to use external business support services".*

He concluded *"In terms of the future support that companies like CVS can expect from the Scottish government to create and protect jobs, this has given me an insight into the challenges faced by just one fast growing company and the need to engage with business-owners to help them break down the barriers to growth."*

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Advanced Planning and Scheduling in an 'engineer to order' business

With a developing business and significant market growth being displayed, BEL Valves recognised the need for new methods of planning and scheduling to manage its growing order book.

Enterprise Resource Planning (ERP) and Excel based planning and scheduling methods, whilst effective with 'same' product mix and medium scale production became challenging with the increase in volume being witnessed and the specialist bespoke nature of valve packages.

It is essential in the engineer-to-order environment that activities are coordinated so there is visibility of the entire production process, from point of order through to completion. It is also key to provide customers with realistic schedules in respect of design completions, materials, manufacturing milestones, and availability of final product.

Production within the business operates at a 'sales order' level per customer project, typically consisting of one to forty line items, each line having different characteristics from valve design, quantity, delivery dates and so on. And it is not uncommon in an engineer-to-order environment for changes to occur to these sales orders be it customer changes, manufacturing method improvements, material availability and so on. ERP and Excel based methods previously deployed made it impossible to understand the consequences of these changes within a reasonable timescale – and sometimes not at all.

It was recognised however that a software enabled planning and scheduling tool was needed to quickly rebuild a schedule to reveal those consequential changes in real time.

Advanced Planning and Scheduling, (APS) refers to a manufacturing management process by which raw materials and production capacity are optimally allocated to meet demand. APS is especially well-suited to environments where simpler planning methods cannot adequately address complex trade-offs between competing priorities.

In the form of a data link from the business ERP system, APS uses planned manufacturing data and material availability and applies it to a virtual data model of the manufacturing environment which mirror's resource availability, shift patterns and resource performance factors. APS schedules the manufacturing data to give

a plan that prioritises which component operations should be worked upon, in which order and on which resource to achieve the business needs. As well as providing a manufacturing plan, including individual resource loading lists, it also allows capacity review and load balancing, removing bottle-necks and utilising under loaded resources.

Traditional planning and scheduling systems such as Manufacturing Resource Planning (MRP) utilise a stepwise procedure to allocate material and production capacity. This approach is simple but can be cumbersome, and does not readily adapt to changes in demand, quantity, resource capacity or material availability. Materials and capacity are planned separately, and many systems do not consider limited material availability or capacity constraints.This approach can result in plans that cannot be executed.

As transactions are made over the 24/7 working patterns with the business ERP system, APS is updated on a daily basis to keep the software in line with current manufacturing status and new demand.

The business would typically have more than 25,000 'live' manufacturing operations in, or awaiting processing at any one time. APS is able to take this volume of data and calculate a first hit schedule within minutes across circa 165 resources considering multiple constraints within the business. In addition APS has a number of optimisation rules to provide different scheduling methods depending on the area of manufacture, product type and volume of components.

Changes during order execution are common within this environment and APS offers the flexibility to quickly rebuild a schedule to review the impact of change. By quickly identifying bottlenecks, overloads and under-loads, decisions can be made to re-assign manufacture to other areas of the plant.

This flexibility and ability to adapt to changes quickly has provided the business with an increased visibility and control of its manufacturing environment even in light of the significant increases in volume which have ultimately provided their customers with an enhanced level of service.

By BVAA's Technical Consultant, Peter Churm

TECHNICAL HOT SPOT

BS EN 12266-1:2012 Standard

Industrial valves — Testing of metallic valves Part 1: Pressure tests, test procedures and acceptance criteria — Mandatory requirements

This British Standard has now been published and is the UK implementation of EN 12266-1:2012. It supersedes BS EN 12266-1:2003 which is withdrawn.

It specifies requirements for tests, test procedures and acceptance criteria for production testing of industrial valves made of metallic materials. The specified tests may also be used as type tests or acceptance tests. Safety devices are not covered by EN 12266-1.

Note: For testing of industrial valves of thermoplastic materials, ISO 9393-1 and ISO 9393-2 apply.

The main changes compared to the previous edition are:

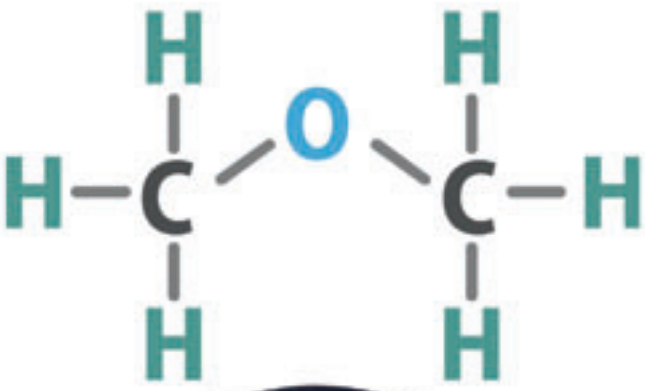
- The scope was specified and editorially revised
- Normative references are updated;
- Clause 3 Terms and definitions are revised;
- Clause 4 Test requirements are changed;
- A.1.6 Allowable pressure at room temperature is deleted;
- Table A.2, *"Minimum test duration for shell tests"* has been updated
- Annex ZA revised
- Bibliograpghy updated

Copies of this standard are available from BSI www.standardsuk.com

High Performance Seals Extend DME Fuelled Transport Operations

Dimethyl ether (DME) burns much cleaner than diesel oils, and is also proving to be an economic and effective alternative fuel or fuel additive for use with gas turbines as well as petrol and diesel powered engines. However, the seals used on diesel engine injector tips must be specified to resist degradation where an aggressive alternative fuel such as DME is being used. Several elastomers and even fluoroelastomers (FKM's) have been evaluated for use with DME powered engines, but operating temperatures above 100°C have led to seal degradation resulting in reduced engine performance and reliability.

However, the operation of diesel engines powered by DME fuel for commercial passenger transportation, with DuPont™ Kalrez® 6375 O-ring seals fitted to the fuel injectors, has achieved and maintained reliable engine performance without premature seal degradation. The broad chemical resistance of the Kalrez® parts, coupled with their high temperature compatibility enabled a significant improvement in engine performance as well as considerably extending useful operating life.



DME's low calorific value means that there is a higher ratio of DME to diesel fuel required for the same distance travelled. However, the clean-burn characteristics of DME means that the environmental gain outweighs the lower energy density, and DME also helps to reduce overall petroleum dependence. Historically the largest use of DME has been as a substitute for propane in LPG, where it has been used in China as a household and industrial fuel. Other applications are as aerosol propellant and as a refrigerant, together with applications as a low-temperature extraction agent in specialised laboratory processes. DME is primarily produced by converting hydrocarbons from natural gas or coal, but manufacture from biomass has also now been established. The product has very low emissions, it is sulphur free and meets even the most stringent emission regulations in Europe, USA and Japan.

The DuPont™ Kalrez® range of sealing products are available in the UK from Dichtomatik Ltd, an authorised distributor for these products. DuPont™ Kalrez® 6375 seals are designed to give outstanding performance when operating with the widest possible range of chemicals and temperatures. The curing system for this product allows for a continuous upper service temperature of 275°C with even higher temperature short excursions also acceptable. Low volume swell, which is an excellent predictor of performance, is also a recognised positive feature of this product.

New Era for Hobbs Valve

Another era is dawning for Hobbs Valve with an extensive investment in the expansion of their manufacturing operation based in South Wales.

With an ever increasing international demand for the companies TVT range of Triple Offset Butterfly Valve Products, the need had come to increase the production facility by a further 30,000 square feet. Moving into this facility during October has seen their capacity to manufacture Triple Offset Butterfly Valves increase by a substantial 300%.

Hobbs Valve expect to enhance this new facility by equipping it with extra testing capabilities during the first quarter of next year capable of testing large diameter bore cryogenic Triple Offset Butterfly Valves in readiness for the increase in demand.

This new facility will also house the newly acquired Precision Engineering Company purchased this year offering the company greater control over its supply chain capabilities and capacity. Managing Director Rhys Jones suggested suppliers have seen a consistent increase in demand for materials and components and have had difficulties in keeping up with the speed to which the organisation has grown. It is believed that through this expansion and the acquisition of the Precision Engineering Company, Hobbs Valve will be able to buffer the growth in demand placed on its suppliers whilst ensuring the organisation can continue to enhance its international market share through servicing larger orders.

Year on year Hobbs Valve has consistently seen on average an increase in turnover of 25% and this year is no exception. Chairman Alun Hobbs stated, *"Year on year growth offers challenges along with rewards to the business and I am confident that the Hobbs team can service customer needs as we continue to enhance our performance in line with our continuous improvement programmes."*

The expansion of the business has already seen a further 10 members added to the team right across the company and with this forever expanding team Hobbs Valve are predicting to continue increasing turnover.

Business Minister Edwina Hart stated: *"It is really pleasing to hear of businesses like Hobbs Valve being able to expand and create jobs through Welsh Government support. It is vitally important that companies have access to finance to take advantage of market opportunities as they arise."*

NAMTEC joins Advanced Manufacturing Research Centre

The National Metals Technology Centre (NAMTEC) has joined the University of Sheffield's Advanced Manufacturing Research Centre (AMRC) to better promote innovation and competitiveness among UK manufacturers.

As of 1 August 2012, NAMTEC has become a core part of the AMRC group alongside the AMRC with Boeing and Nuclear AMRC. The established NAMTEC team now operates from the AMRC campus at the Advanced Manufacturing Park in Catcliffe, Rotherham.

The move will provide significant benefits. The combination of NAMTEC's supply chain support programmes with the AMRC's research capabilities and high-level industrial collaborations will provide a stronger and broader base to share innovative technologies and increase competitiveness across the UK manufacturing community.

NAMTEC has supported the manufacturing supply chain since 2002, delivering an extensive range of training and consultancy programmes to a base of 20,000 manufacturing companies. A closer relationship with the AMRC's world-class research facilities and findings will allow it to cascade innovative technologies and ways of working through the supply chain. The opportunities for NAMTEC within the AMRC setting are outstanding. Initial plans include extending its core training and consultancy programmes, developing a new hub for metals and materials research, and expanding the membership offer.

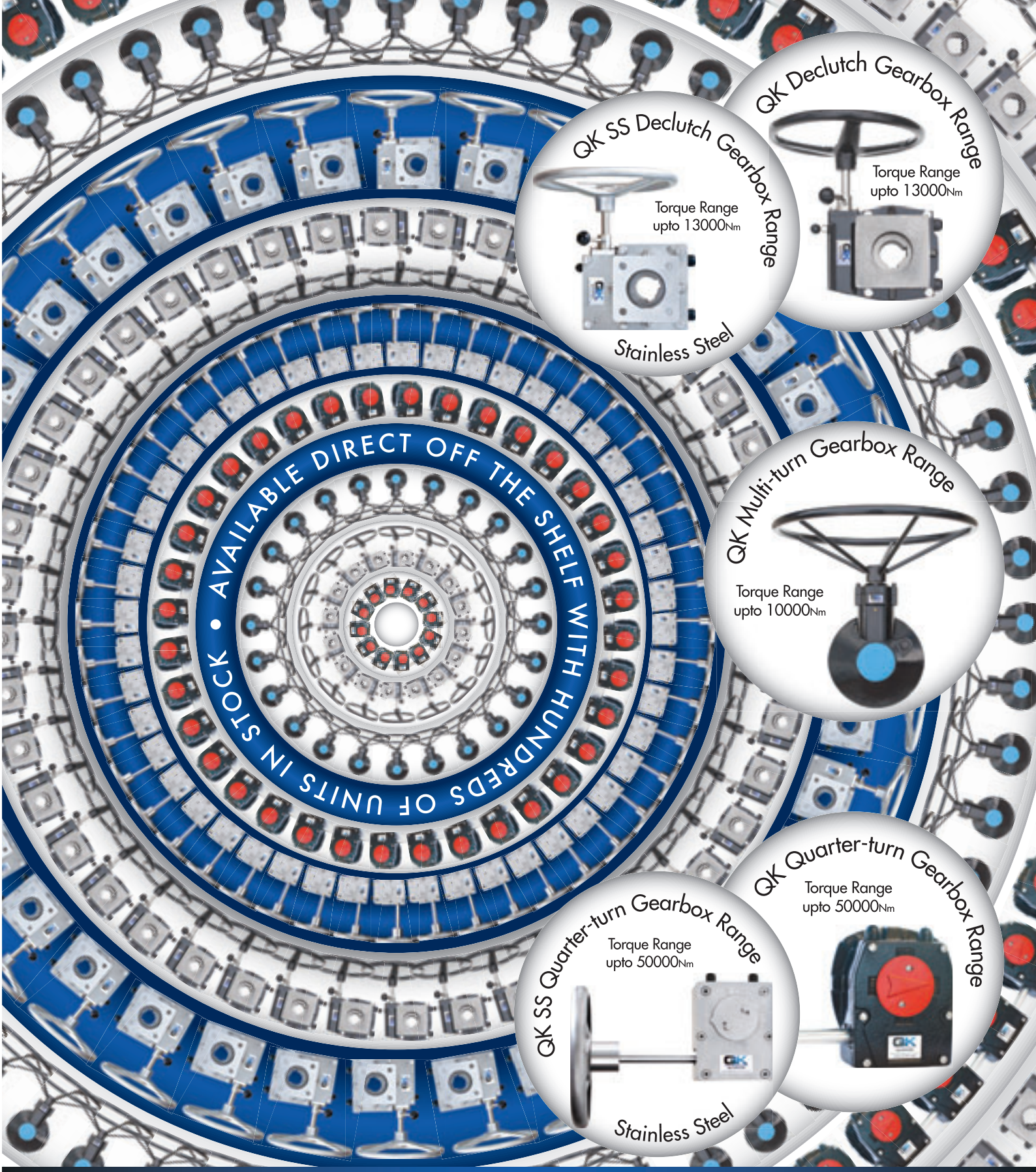
The University of Sheffield has forged strong links with many of the world's largest and most innovative manufacturers, most notably with the launch of the AMRC with Boeing in 2001. Since then the AMRC group has gone from strength to strength, building on the success of the AMRC and new Nuclear AMRC in a range of exciting new ventures and consolidating the University's position as a global leader of engineering excellence. The integration of NAMTEC will support the AMRC's aims to strengthen technology transfer and competitive advantage along the manufacturing supply chain, particularly among the UK's base of small and medium-sized enterprises (SMEs).

Professor Keith Ridgway, co-founder of the AMRC, said, *"We are delighted to welcome NAMTEC into the AMRC. The nation-wide contribution of NAMTEC to developing SMEs, outstanding training and technology transfer is well known and perfectly complements our existing work with manufacturing companies. Bringing those strengths into the AMRC matches our ambitions to continue to transform our economy through a true collaboration between world-class research and manufacturing industry."*

Alan McLelland and Prof. Keith Ridgway

Dr Alan McLelland, CEO of NAMTEC said, *"This is a unique opportunity for both organisations which will directly benefit the UK manufacturing supply chain. The AMRC is at the forefront of manufacturing developments, driving forward manufacturing technologies which can provide the UK, including the SME supply chain, with significant commercial advantage in a global marketplace. NAMTEC, with an unrivalled access to this supply chain, provides a fantastic conduit to flow these developments into our manufacturing companies, encouraging growth and helping lead the UK manufacturing renaissance."*

The supply chain development programmes of NAMTEC and the existing AMRC research centres will be combined to significantly improve the offering to both full and community member companies. A merged Manufacturing Forum will provide members with high quality intelligence on technology and markets to facilitate investment, growth and diversification and in turn improve competitiveness. The events programme will be underpinned with a range of publications including technical and market reports. NAMTEC's established reputation as a deliverer of technology transfer programmes will also strengthen the portfolio of the AMRC Knowledge Transfer Centre (KTC) which was opened by HRH The Duke of York in May 2012.



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Expansion for fast-growing Valveforce

Just four years on from its founding, steam system and flow control specialists Valveforce has made a threefold increase in its floor space by moving to new purpose-built premises in Solihull, West Midlands.

After relocating from central London only two years ago, Valveforce rapidly outgrew its base, prompting a switch just a stone's throw away to a much larger building, where it can further strengthen its assembly, testing and servicing of valve systems, as well as stock more off-the shelf products.

Marc Bozdogan, Valveforce's founder and Managing Director said: *"We're growing because we understand and engage with our customers and treat them well. I'm very proud of our team whose outstanding customer support and technical expertise has led to this latest expansion."*

The new Valveforce headquarters on Radway Road was officially opened by Alan Volkaerts, President, Solihull Chamber of Commerce and Operations Director - Solihull Plant at Jaguar Land Rover.

"Across numerous market sectors", he said, *"Valveforce are proving that they can offer all the advantages of big business support, but with genuine personal service and acclaimed technical expertise, this independent company is going from strength to strength with a move to a bigger and better facility".*

Official opening of new Valveforce facility

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By BVAA's Technical Consultant, Peter Churm

TECHNICAL HOT SPOT

PD 5500: 2012 'Specification for unfired fusion welded pressure vessels'

The latest revision of PD 5500 has been published. It outlines the latest amendments to the specification up to and including those published in September 2011.

It is the start of a new 3 year cycle specifying requirements for design, manufacture, testing and verification and can provide a basis for vessel design and manufacture for PED compliance.

It contains all amendments, annexes and enquiry cases made during the last 3 years and supersedes PD 5500:2009 which is now withdrawn.

Key 2012 revisions include:

- Clarification of the use of subcontractors
- Tubesheet minimum thickness requirements for large tube diameters
- Clarification of the requirements for static head in the evaluation of test pressure
- Revisions to the impact testing requirements of Annex D
- Inclusion of a new enquiry case 5500/139 for the ISO 16528-2:2007 Conformance Tables

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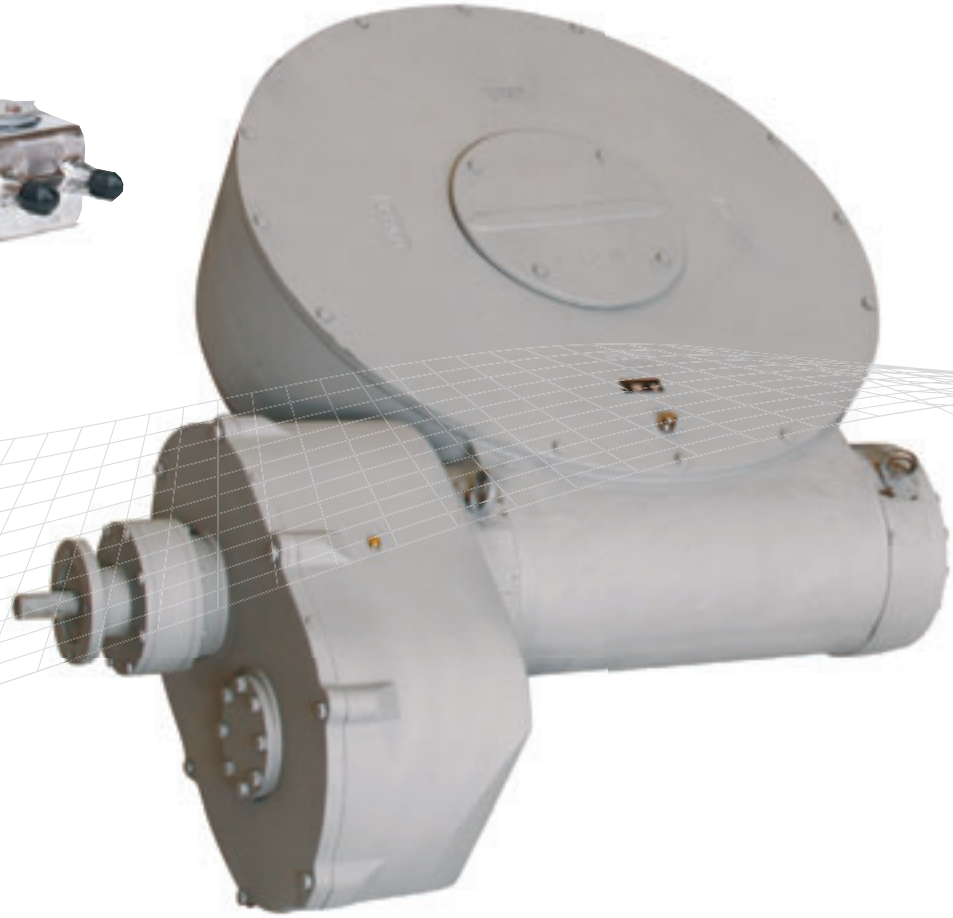

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EnerMech Invest £5 Million in Saudi Arabian Joint Venture

Mechanical engineering group, EnerMech, will invest up to £5 million and create 40 jobs as part of an expansion programme in Saudi Arabia.

The company has signed a joint venture agreement with Shoaibi Group to form EnerMech Saudi Arabia Limited (EnerMech S.A. Ltd) and will share office and warehousing facilities in Al Khobar.

EnerMech S.A. Ltd will provide crane, hydraulics, valves, process, pipelines and umbilicals (PPU), lifting and inspection services, equipment rental and specialist training to the Saudi Arabian energy sector.

The company expects to invest up to $8 million (£5 million) in infrastructure and equipment in the next 18 months and to have a Saudi Arabian workforce of up to 40 in the first two years.

Shoaibi Group will facilitate EnerMech S.A. Ltd's operations and provide essential marketing and technical support services under the agreement. This new joint venture will further enhance Shoaibi Group's vast energy services portfolio which caters to most segments of the oil, gas and petrochemical industries in Saudi Arabia.

EnerMech eye up Saudi expansion following valves management success.

EnerMech managing director, Doug Duguid, said: *"Building a strong presence in Saudi Arabia has always been our ambition and this partnership with Shoaibi Group is an excellent platform which allows us to do this. We have existing bases in Dubai, Abu Dhabi and Qatar and this joint venture is a natural progression in growing our business in the Middle East."*

EnerMech has previously completed a valves management project and provided training services in Saudi Arabia. Norman Kirk, who was previously with Baker Hughes in Saudi Arabia, has been appointed general manager for the new entity and has wide experience of the oilfield completions market in the Kingdom.

Chairman of EnerMech S.A. Ltd, Mr Faisal Al Shoaibi, said: *"We are extremely pleased to enter into this venture with EnerMech. Shoaibi Group's growth is dependent on such partnerships and we are delighted to collaborate with EnerMech and jointly develop the business in Saudi Arabia. By leveraging our combined strengths and creating a common platform to pool our expertise, the venture is bound to be successful."*

EnerMech has invested in a range of hydraulics and pumping equipment to be based in-country and will make further investment to expand the equipment fleet. The company has a presence in 20 countries, covering all the major international oil and gas producing hubs.

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How do you keep up with valve industry developments?

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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:-
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Parker PID-T actuator range

Extends operating life and reduces maintenance costs

Parker Hannifin, the global leader in motion and control technologies, has recently introduced its P1D-T range of actuators available with bore sizes up to 320mm. This highly competitive range of ISO 15552 actuators is suitable for a wide range of industrial applications. Due to its anodised barrel and die cast end plates the range offers excellent corrosion resistance, thus increasing the number of different environments they can be installed in plus extending the operating life and reducing maintenance costs.

Available in 160, 200, 250 and 320mm bore sizes; the range is available with strokes lengths of 10 to 2000mm. The standard operating range is stated as -20 °C to +80 °C and feature both a magnetic piston and adjustable cushioning as standard, which enables higher speeds, shorter cycle times and reduced noise thus increasing productivity. High temperature versions and ATEX derivatives are available on request.

The big bore sizes and high forces make the P1D-T suitable for many arduous industrial applications such as lifting, moving and clamping heavy loads, typically within steel and aluminium production (outside of crust breaking). Additional uses include weight levelling machines, air ventilation and filling systems and for above ground mining projects such as knife gate for platinum, uranium, gold, coal and diamond production.

ISO 15552 actuator range available in 160 to 320mm bore sizes

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By BVAA's Technical Consultant, Peter Churm

TECHNICAL HOT SPOT

Draft ISO/DIS 28921-1 *"Industrial valves - Isolating valves for low temperatures application Part 1: Design, manufacturing and production testing"*

The result of the DIS enquiry on ISO/DIS 28921-1 *"Industrial valves - Isolating valves for low temperatures application - Part 1: Design, manufacturing and production testing"* was approval by the majority of P members with comments. These comments will now be reviewed and considered by ISO/TC 153/SC 1/WG 13 for inclusion in the standard prior to a further issue for formal vote.

The purpose of this International Standard is the establishment of basic requirements and practices for design, fabrication, material selection and production testing of valves used in low temperature services.

It applies to gate, globe, check, butterfly and ball valves and may be used for other valve types used in low temperature services from –50°C down to –196°C.

It covers valves with body, bonnet, bonnet extension or cover made of metallic materials having nominal sizes DN: 10 to 900 and corresponding nominal pipe sizes NPS: 3/8 to 36.

ISO/NP 28921-2 *"Industrial valves - Isolating valves for low temperatures application – Part 2: Type testing"*

This draft standard has been prepared by the ISO/TC 153 SC1 WG13 Project Leader (Korea). The draft standard has been circulated at this stage to ISO/TC 153/SC 1 for information.

ISO/TC153/SC/1/WG13 were to discuss the content during its meeting in Paris in September 2012 and either organise a specific WG13 meeting to discuss the draft ISO/CD 28921-2 before submitting it to CD enquiry, or request SC1 secretary to launch CD enquiry after SC 1 plenary meeting.

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MetalTek International Reorganization Emphasizes Market Focus

MetalTek International, the manufacturer and integrator of quality high-alloy components, announced a reorganization recently designed to solidify its growth strategy as a metals technology provider in key target high performance global markets.

The announced restructuring creates three new business units. The North American Businesses Group consolidates the company's industry-leading technology and manufacturing capabilities in centrifugal, sand, investment, and continuous casting into a single organization. The MetalTek European Group consolidates local Sales, Marketing, Engineering, and Manufacturing functions into an organization that will continue to emphasize the company's major thrust and expansion in Europe. And finally, the MetalTek Energy Group has been created to further strengthen the company's penetration into key energy sectors including Oil and Gas, Conventional and Nuclear Power Generation, and Environmental.

"We are dedicated to a high growth strategy in our key target markets. This refined structure will help us continue to focus on those markets and ensure our manufacturing operations meet our customer expectations for today and into the future." said MetalTek CEO Robert Smickley. *"We really believe that the combination of heat, wear, and corrosion-resistant solutions that we offer to our customers is unparalleled. This new organization will make it even easier for customers in our target markets to access all that we offer."*

Valve Body produced using low turbulence casting process at MetalTek's Meighs Castings Ltd. subsidiary in Stoke on Trent.

"MetalTek continues to exhibit strong revenue growth," added Smickley *"which is due in no small part to understanding what our customers need and then finding ways to deliver it. We see increasing demand for environmental and energy products - including emerging energy - now and into the future as the world deals with how to meet the demands for increasing energy consumption while ensuring environmentally responsible means of producing that power. Our Energy Group will help our customers meet that challenge."*

MetalTek International is a privately held metals technology company, headquartered in Waukesha, Wisconsin, USA. The company employs more than 1,250 people in eight facilities in the U.S., Scotland and BVAA-member Meighs Castings in Stoke-on-Trent, England

Heating The Debate!

ISIS Fluid Control Supply Isotherm Heat Exchanger Packages to the Houses of Parliament

With the well publicised multi million pound refurbishment of the Palace of Westminster under way, ISIS Fluid Control worked closely with MITIE Built Environment to supply several steam to water Isotherm heat exchanger packages to serve the low temperature hot water requirements to the Palace whilst the refurbishment goes ahead.

The Isotherms ranged from an output of 2.2 MW to 800 KW and were supplied as compact skid mounted assemblies. The ISIS units were chosen due to there ability to utilise the existing plant steam and reliably supply low temperature hot water at 82°C. Due to the plant room size constraints ISIS took a lot of consideration into the skid design to make them fit into the space provided. Due to the narrow access it was also required that ISIS dismantled and rebuilt the units in situ to physically gain access to the plant room. The packages incorporated VALSTEAM ADCA control valves and steam traps and all of the temperature controls required to supply a complete 'plug and Play' solution.

With the VALSTEAM ADCA range of products and our technical steam knowledge ISIS Fluid Control can offer all valves and packaged solutions required for a steam system.

Couple this with our Worcester Norbro, Asco and large process valve range we can competitively supply all valves for your process systems also.

If you require a site visit or any further information regarding ISIS please do not hesitate to contact us. sales@isis-fluid.com

ISIS Fluid Control Ltd
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ISIS FLUID CONTROL LTD

By BVAA's Technical Consultant, Peter Churm

TECHNICAL HOT SPOT

ISO/DIS 10631 *"Metallic butterfly valves for general purposes"*

The results of the DIS enquiry on ISO 10631 have been published.

ISO/DIS 10631 was approved for acceptance, with 13 out of 14 P - Member countries voting in favour of the DIS. (93 % requirement >= 66.66%)

(P-Members having abstained (6) are not counted in this vote.)

However many technical comments have been received from USA who voted disapproval of the DIS. Although the DIS is formally approved these comments will be discussed and considered by ISO/TC 153/SC 1/WG8 at its next meeting prior to any decision being taken.

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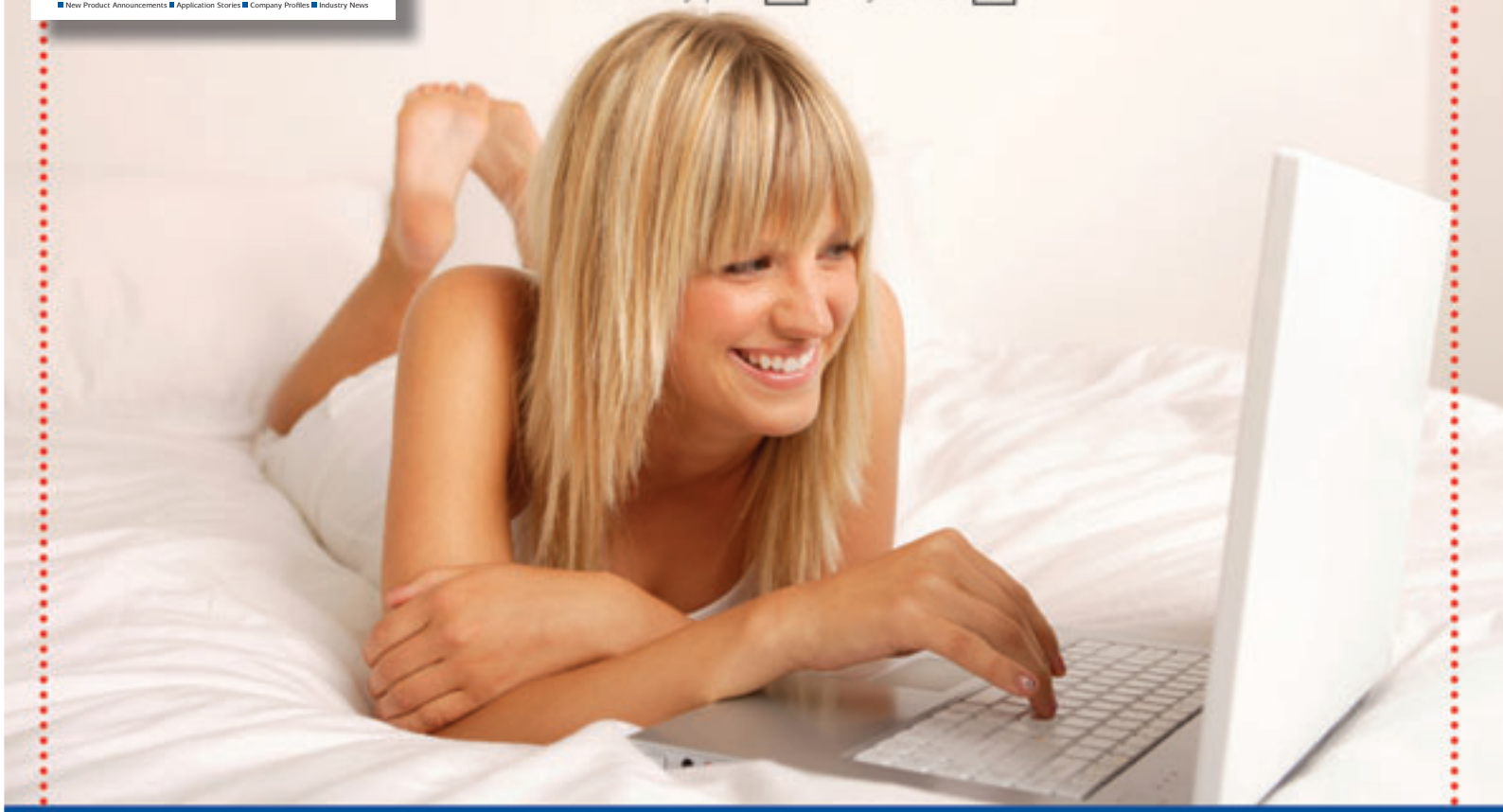

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