

valveuser

Magazine

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SVS - Optimising Asset Integrity



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Page 38



IMI CCI to Exhibit at ONS 2018
Page 46



Kent Introl's OEM Valve Diagnostics Service
Page 68



Introducing Laser Ltd
Page 87



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Cover: SVS's Qatari Case Study - Page 26



By BVAA Director
Rob Bartlett

Inspirational!

The bonds and friendships made in early years are often the strongest. So too can be the influences we have in those formative times.

I, like many other young engineering students, at the tender age of 16 came under the influence of a great team of engineering lecturers. Superb engineers all. But also versed in life skills, and with the real-life, dirt-under-the-fingernails practical experience of the workplace that infused *survivability* into their young apprentices.

I was doubly fortunate that our 'year' had a level of comradery, it turns out, that was somewhat beyond other cohorts. We've stayed in touch, held reunions, and reaffirmed individual friendships that have endured for decades.

Sadly, our keenest reunionist and most senior lecturer, Keith 'Mr Vick' Vickery, recently passed away, at the age of 83. Seven of our original class of 20 attended his funeral, plus two surviving lecturers. Oh, and about 200 others whose lives he'd also touched! Knowing his love of motorsport (he used to build racing cars as a hobby) some endeavoured to attend on motorcycles and in hobby cars, to make a raucous din that would have made Keith smile and remind him of our near-synchronised - very loud and smokey - arrival at college every morning.

Letting a bunch of 16/17 year olds loose in a risk-rich environment such as an engineering lab, awash with machines, explosive gases, sharps, etc. must have been a daunting responsibility, and for the first few weeks at least the place was run like an Army boot camp. Keith heartily fulfilling the role of troop sergeant.

Once trust was established however a genial, indeed wise-cracking, inspirational mentor emerged who appeared to have

the Magneto-like ability to mould metal to his will, and could rectify any catastrophe I'd created on a phase test with a few expert strokes of a file and emery cloth.

I and others looked on in awe. He encouraged experimentation, came out with the imitable line 'a good engineer is basically lazy,' (always looking for an easier solution), explained your work's shortcomings (often colourfully) but then gave encouragement and wisdom - usually a demonstration - and was kinder in his marking than was probably merited, all to build you up.

Our last interaction was him showing on social media that he'd utilised a shed tip I'd posted - one he'd probably known for years but nevertheless was still encouraging me - 37 years on - in doing something moderately inventive.

As we stood at his side saying a final farewell, a fellow student remarked to me on how, as a youth, you don't appreciate how such figures can be so inspiring, and influence your life so comprehensively, for so long. I'm thankful that at our last reunion, I *did* get an opportunity to quietly thank *Mr Vick* for exactly that.

If you do nothing else today, go and thank someone who's inspired you.



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- Introduction to Valves | *Monday, 1st October*
- Introduction to Valve Actuators | *Tuesday, 2nd October*
- Control Valves (CPD Accredited) | *Wednesday, 3rd October*
- Safety Valves (CPD Accredited) | *Thursday, 4th October*
- Valves Advanced Level | *Monday, 8th~9th October*
- Safety Integrity Levels (SILs) | *Wednesday, 10th October*
- PED/ATEX Directives | *Thursday, 11th October*
- Managing Commercial Risk | *Tuesday, 30th October*

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Spring Conference...



BVAA Conference in full flow

The 2018 BVAA Spring Conference and Golf days proved a huge hit with members and guests

With early-bird members and speakers arriving the night before for a relaxed convivial supper together, on 16th May scores more members assembled for the BVAA Spring Conference, this year at the delightful Formby Hall.

The first speaker was Matthew Fancourt of KOIOS on the topic of *'Accurate master data using ISO 8000 – the International data quality standard.'* A new topic to many, Matt explained the growing importance of the new standard and the expectation of it being mandated by oil and gas customers.

Next was Anthony Tutaj of Sercons, covering *'Russian Certification, what's required and how to proceed with approval.'* Anthony gave an overview of the countries for which the CU TR (EAC) Certifications applied and active projects in Russia and Kazakhstan. His particular focus was on the Technical Regulations that applied to valves and actuators.

After the break, Nigel Goodrich, a Fit for Nuclear Industrial Advisor at the Nuclear Advanced Manufacturing Research Centre spoke on *'Fit for Nuclear, Supplier Development Programme,'* covering an overview of the NAMRC, and the 'F4N' programme.

He explained how the Nuclear AMRC helps manufacturers win work in nuclear, and introduced its world-leading capabilities for industry-focused manufacturing innovation. He also gave a view on how the F4N programme can help companies prepare to bid for nuclear work.

Following on was Fraser Maitland of WorleyParsons, who spoke passionately on the subject of *'Fire Testing in the Oil and Gas Industry - A Pragmatic Approach.'* Fraser quite rightly pointed out that in an industry so focused on the safety of its people and integrity of its assets, the quality of valve testing should be no exception. He pointed out the ambiguities in the various ISO, API, etc. fire-test standards. He observed how a Risk Based Approach could ensure valves were satisfactorily tested to meet client needs without over-engineering and challenged some of the requirements.

His offer to engage personally in a standards revision was warmly welcomed, and an excellent example of suppliers and customers working together to a common benefit.

Kevin Ledwith spoke next on *'How UK Export Finance can support UK Exporting Companies.'* Kevin - an Export Finance Manager for UK Export Finance (UKEF) in the North-West - explained how he and his colleagues assist companies in understanding export finance requirements and identifying an appropriate solution. He noted how the UK Government, acting through UKEF can assist the UK's exporting companies to win and fulfil contracts and ensure payment.



Desktop Exhibition



Anthony Tutaj, Sercons

The Conference closed out with two market report presentations. The first was by Jeremy Leonard of Oxford Economics (OE), on the 'Global industry outlook and the implications for valve markets.'

Jeremy reminded members that OE were the providers of the BVAA Global Valve & Actuator Market Outlook. As well as outlining the recently launched latest iteration of the report, with its various improvements, Jeremy reported on the strong momentum of global industrial activity in the second half of last year, persisting into the early months of 2018. He noted the strong positive implications for valve markets. He also described the key economic and sector trends that were driving the outlook for valve demand.

Closing out the day was another regular speaker, Steve Robertson of Westwood Global Energy, on their 'Global Oil & Gas Market Outlook.' He noted that the recovery of hydrocarbon prices in 2017 had brought a renewed sense of optimism in the oil & gas industry. There was encouraging news re: some recovery in project sanctioning, albeit operators remain focussed on keeping tight controls on costs. He noted that the industry's supply chain had seen a period of dramatic consolidation and for many equipment vendors and EPCs, the downturn had resulted in backlogs at their lowest levels for over a decade.

At the invitation of BVAA, Steve also outlined a proposal for a regular market forecast for members, which proved a very well supported idea.*

*BVAA Members-only should be receiving their first bi-annual report in late July.



Great fun had by all at BVAA dinner

Desktop Exhibition

Throughout the day, BVAA also hosted a desktop exhibition, comprising eighteen desks, adjacent to the conference area. Mainly for our own members involved in the industry's supply chain, the event also featured help desks from BVAA's various speakers, contributors and also our Future Leaders group.

Dinner & Entertainment

A great tradition of the spring gathering is the evening reception and dinner, and this year was no exception.

Great friends and fellowship are an essentially ingredient of course, but the highlights of the evening were undoubtedly the two stellar performances of our guest entertainers...



Fraser Maitland took on additional duties as official piper for the night, while guest comedian Rod Woodward was hilariously funny from start to finish and had members in paroxysms of laughter with his wry observations on life.

... and Golf



BVAA Cup winners: Golf Sponsor Martin Peat of DMR Seals with (L to R) Matthew Riach, Dean Holroyd, Peter Burnett, BVAA Director Rob Bartlett and Mark Topliss



Peter Burnett, with a nice cover drive... (Photo: Neil Jackson)



Despite this, they still won (Photo: Neil Jackson)



The BVAA Team, aka 'The Wooden Spoon Dodgers,' comprising honoured guest Fraser Maitland, Martin Greenhalgh, Dave Martin and Rob Bartlett.

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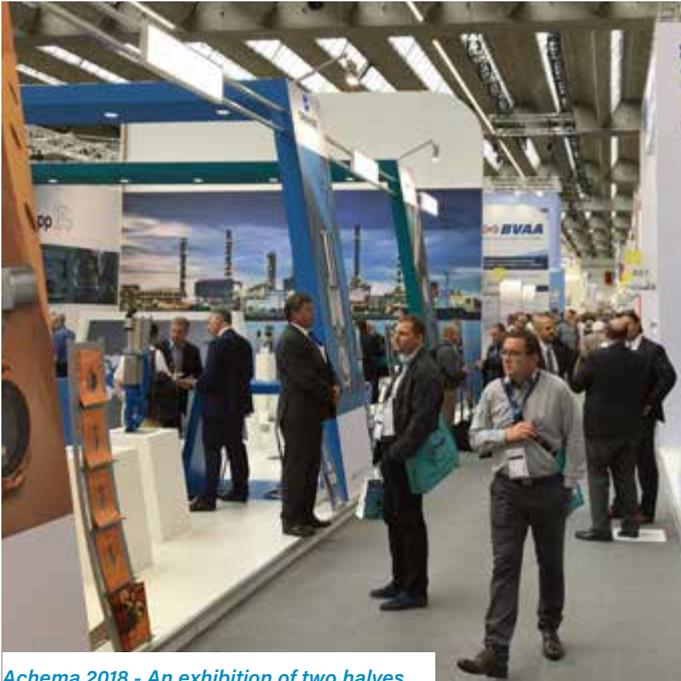
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Auf Wiedersehen Achema!



Achema 2018 - An exhibition of two halves

On 11th to 15th June 2018, BVAA exhibited at the Achema event in Frankfurt - thanks in part to the efforts of BVAA members Rotork, who allocated BVAA some of their space in the coveted Hall 8

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 At Achema, Hall 8 is where the action is, and so it proved in 2018 – at least in part!

BVAA Director Rob Bartlett comments, 'Achema is widely regarded as the most important process industry show around and this was our first visit in 6 years. The 2012 event (Hall 9) had been a very quiet affair for the Association, and we learned a valuable lesson in the importance of a good hall/good location. Indeed we passed on the 2015 event due to the unavailability of a good position.'



BVAA's Martin Greenhalgh helping visitors at the BVAA stand at Achema



(L-R) BVAA's Technical Consultant, Martin Greenhalgh and CEO Rob Bartlett

Rob continues, 'BVAA's Technical Consultant, Martin Greenhalgh, and myself, attended the first half of the 2018 show, and were rewarded with a busy few days. A mixture of offering advice on where to find products from members, promoting members and Valveuser magazine etc., and – lastly and most intriguingly – taking nine membership enquiries from UK companies. Regrettably attendance tailed off in the latter part of the week, but BVAA's Karen Webb and Rob Boycott used the time well to engage with the many BVAA members present.'

The official stats for the show reveal 145,000 visitors from 55 countries.

Dates for Diary: AchemAsia takes place 21-23 May 2019 in Shanghai, Achema Germany 14-18 June 2021, Frankfurt.

BVAA Desktop exhibition at Nuvia, Risley



On 20th June BVAA organised yet another very successful desktop exhibition - the twelfth in the last 12 months - at Nuvia UK's Risley facility at Warrington

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Nuvia's heritage dates back to the very beginning of the UK nuclear industry, and valves and actuators form an important part of their solutions for some of the most challenging environments imaginable.

Ten BVAA members were hosted by BVAA's Karen Webb and Rob Boycott, and were rewarded with fifty visitors from a wide variety of departments in the business, including Engineering, Piping, Process, Procurement, etc.

Gemu's Steve Fare commented, *'It was a pleasure for Gemu valves to be able to exhibit at a well organised and attended event at Nuvia Warrington.'*

Want to improve your company's valve procurement?

Just contact rob@bvaa.org.uk for a no obligation chat about our desktop events.

Mad Hatters

Bendigedig!

Thermal Energy International's Edward Gray tackles the Welsh Three Peaks Challenge

On June 16th, Edd took part in the Welsh Three Peaks Challenge; braving Snowdon in the North, Cadair Idris in mid-Wales, and Pen y Fan in the South.

The total walking distance of 17 miles (27.4km) and ascent of 2,334 metres (7657ft) was conquered on behalf of The Leading Lights, a Bristol-based charity set-up in 2014 by a group of tutors, teachers and counsellors to help young people reach their potential.

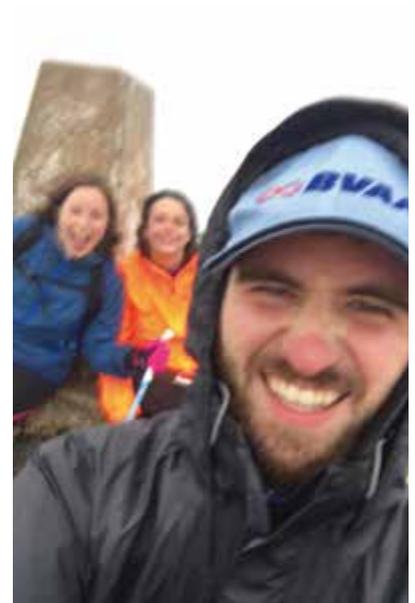
The organisation and its team of supporters are raising money to transform a defunct café in the city centre into a community and wellbeing hub. Here, The Leading Lights will host drop-in and group therapy sessions for children and their families who are struggling with social, emotional and mental health difficulties.

Despite the unseasonal sleet, the determined group smashed their goal of completing the challenge within 24 hours, reaching their third and final peak within just 17. The team's achievement has raised a of £10,285 so far, putting them well on their way to reaching the £30,000 target needed for the project.

www.justgiving.com/crowdfunding/leadinglightseducationandwellbeing



Thermal Energy International's Edward Gray sporting the BVAA hat at the three peaks



Hat Up!

If you've a charitable event planned, contact rob@bvaa.org.uk.

The BVAA will donate £50 to your charity if you submit a behatted photo for publication.

Night Walkers spotted in the Cotswolds



(L-R) Mark Farrell, Cliff Hall, Jenny Dark and Martin Sandles

Arc Energy participate in night walk challenge covering 40 miles of the Cotswold Way

Arc Energy have raised a total of £2,122 for children's charity Action Medical Research, dedicated to improving the health of babies and children.

At midnight on the 9th June, Arc Energy's Mark Farrell, Cliff Hall, Jenny Dark and Martin Sandles set off on their night walk challenge, which covered 40 miles of the Cotswold Way.

This is the 4th time that Arc Energy have supported this event, and so far they've raised over £5,000.

To donate please visit: www.action.org.uk/sponsor/arcenergy18



Special Quality Alloys team

Raising their

Special Quality Alloys Ltd raise £888 for Prostate Cancer UK, all in a days work!

Special Quality Alloys Ltd with the help of their sister company Special Machined Products Ltd, kicked off their charity day by encouraging colleagues to wear their favourite sports shirts for a good cause. A day full of raffles and possibly too many cakes (if there is such a thing), the team raised a total of £888 for Prostate Cancer UK. For being such good 'sports' and championing the BVAA insignia, the association has donated £50 to the companies chosen charity.

Future Leaders

Cohort 3 of the BVAA Future Leaders Programme have continued their studies, holding two further sessions in the spring/early summer

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In May there was a visit to Crane in Cwmbran, and in June the group travelled to KKI in Brighouse. As well as incredibly interesting masterclasses - on two different products and business systems - both sessions included Personal Development days, this time on 'Time & Life Management' and 'Emotionally Intelligent Leadership' respectively.



A demonstration of traditional hand-lining of diaphragm valves at Crane



Checking out a diaphragm assembly at Crane, Cwmbran



Dr Martin Haigh MBE receives an award on behalf of the I.Mech.E



KKI's Tim Capewell explaining the usefulness of whiteboards
(Photo: DesignJunkie)

The group enter into the spirit with role play on Emotionally Intelligent Leadership

New Valve & Actuator Market Tracker Launched!

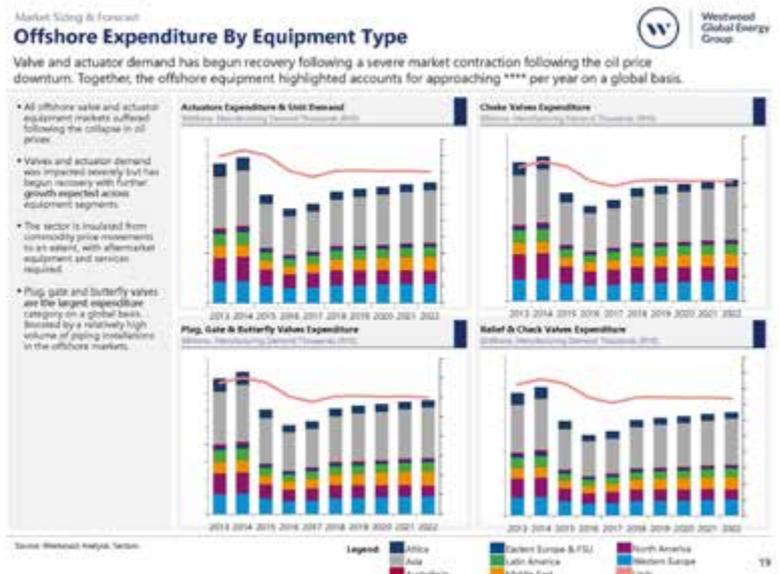
In partnership with BVAA, Westwood Global Energy has launched the first edition of a new valve & actuator market tracker to support members' business planning activities

Now two years into recovery, the outlook for flow control equipment and services is improving steadily, supported by an uptick in offshore drilling activity.

The new Market Tracker leverages Westwood's proprietary databases monitoring upcoming offshore projects as they progress towards a final investment decision, highlighting customer activity levels. In addition, the Tracker forecasts expenditure on a regional basis for a variety of different valve categories and actuators.

In a dynamic industry, the new Market Tracker will capture the recovery of the offshore sector and provide valuable insight for companies active throughout the supply chain.

The report will be updated twice every year, is exclusive to BVAA Members only, and accessible via the Members Only section of the BVAA website.



**Westwood
Global Energy
Group**

New Members...



'STRONGER TOGETHER' - see www.bvaa.org.uk/how_to_join.asp



(L-R) Tony Wood, Engineering Direct and Matthew Kercher, Account Manager



Bernard Controls



(L-R) Dave Bennett, Managing Director & Darren Pearson, Commercial Director of Gee Graphite



(L-R) Rob Smith - Managing Director
Rebecca Folkard - Sales & Logistics Manager



(L-R) John Osborn, Sales Manager,
Vivienne French, Commercial Assistant



Dave Mooney, Managing Director, Drallim

“Stronger Together” - Working Via the BVAA Results in Record Orders

A few issues ago, we covered a story involving our members Heap & Partners, Hobbs Valve and PDL, who, through extensive co-operation and a consortium bid, benefitted from a huge order for all concerned.

BVAA played a major part in that success, and here BVAA's Director Rob Bartlett introduces the explanation of how it came about...

“Signing up is CRITICAL to success.”

‘BVAA operates a number of services to members, that steers them quickly to business opportunities.’

‘Business leads come into the Association in a variety of different ways. We operate a “Market Place” service where enquirers can post their needs, and then these get automatically emailed to BVAA Members who have signed up for the service. Signing up is CRITICAL to success. We aim not to fill members Inboxes with unrequested junk, so a member must first register to receive these leads.’

Rob continues, ‘We also have other methods. These include customers and enquirers directly emailing the Association with their RFQ, or indeed we take a phone call and guide the enquirer to the correct company or companies, using their data about company name, brand or product type, and often advising on the correct person to contact within the company.’

“... members have a massive role to play in keeping their data up to date.”

‘There is also an autonomous Product Sourcing Service webpage where the customer can quickly and easily find lists of suitable suppliers from the data held on our database. Again, BVAA members have a massive role to play in keeping their data up to date. Finally, we produce bi-weekly Market Intelligence Bulletins – notifications of major projects etc. – where, with a little digging, members can discover opportunities in the more traditional ways.’



“... the project was valuable, winnable, but also in need of some expert advice which could potentially save the customer a great deal of money.”

How did the Heaps/Hobbs/PDL success come about?

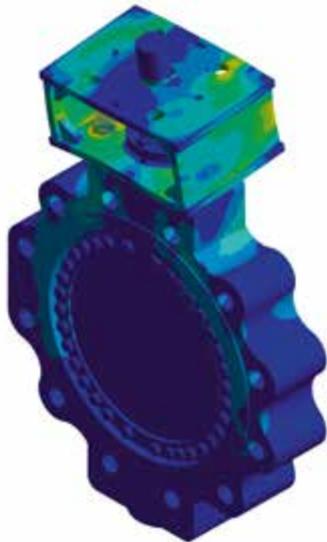
Heap & Partners' Sales & Marketing Director Andy Will explains, ‘Heap & Partners spotted an enquiry published to all BVAA members via one of the BVAA's leads services. On studying, we knew immediately that the project was valuable, winnable, but also in need of some expert advice which could potentially save the customer a great deal of money. We knew too that we needed partners we could trust and rely on to fulfil the full order, and that BVAA was the perfect place to find those partners.’

Andy continues, ‘Via the BVAA's many committees, functions and events, I have come to know and trust many of my British Valve Association colleagues, who had the qualities, products and services we needed to bid, and a consortium was the natural solution.’

“How effective – try a quarter of the original cost!”



www.bvaa.org.uk "Market Place" product sourcing page



An example of the PDL analysis

Hobbs Valve's Group Sales Director, Gavin Wheeler, picks up the story, 'We were delighted to be approached by Andy, and our design team here at Hobbs Valve were well placed to help Heaps and the customer find a better, more cost-effective solution. How effective – try a quarter of the original cost! It was however still the highest value single purchase order received by Hobbs Valve in our thirteen-year history.'

'Three years of hard work however went into refining the package for the customer. This involved extensive physical testing, sometimes of some unusual parameters, where again we needed some external assistance. We also had a need for FEA and CFD to prove the designs, and again we were able to look to a fellow member for that expertise.'

PDL's CEO Paul Charlton explains, 'A relative newcomer to the BVAA at the project's instigation, we were quickly impressed by the professionalism of the Association and its members, and above all the warm, friendly welcome we received on joining. This allowed us to instantly forge strong relationships with several members. On getting the call, we were delighted to be able to lend our expertise to help win the order.'

"...we secured the biggest order in our 150-year history, thanks directly to BVAA membership."

Heap & Partners' Managing Director David Millar concluded, 'Networking with the BVAA membership is invaluable. Not only did we receive this enquiry from the BVAA service but we also managed to help provide the ideal solution for the customer thanks to the close relationships we have built up with our fellow members. As a result, we secured the biggest order in our 150-year history, thanks directly to BVAA membership.'



Paul Charlton
CEO, PDL Solutions



Gavin Wheeler, Sales Director, Great British Valve Group



Andrew Will, Sales & Marketing Director, Heap & Partners



David Millar, Managing Director, Heap & Partners



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Web: www.gbvalvegroup.co.uk

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Email: info@heaps.co.uk
Web: www.heaps.co.uk

Stanlow Exhibition

BVAA's Business Development Consultant exhibits at 'Engineering & Technology Solutions', Essar Oil UK, Stanlow Refinery



On 24th May 2018, BVAA's Business Development Consultant Rob Boycott attended the 'Engineering & Technology Solutions' exhibition at Essar Oil UK's Stanlow Refinery at Ellesmere Port, organised by Nu-tech.

Sixty companies exhibited, and Rob was rewarded with a tidal wave of quality visitors, who completely cleaned him out of BVAA materials.

Rob commented, 'It was great to see so many of our current and potential members attend a very well organised event with interest from a broad spectrum of Stanlow personnel.'



Rob Boycott at Stanlow event

Managing Commercial Risk

The BVAA is delighted to announce that, due to popular demand, they are bringing back their 'Introduction to Managing Commercial Risk, Contracts & Agreements' training course



This one day training session is designed to raise awareness of key commercial risks and how to address them in practical terms. Topics covered include evaluating opportunities for level of risk, pricing, volumes, specification and warranty, liabilities, intellectual property and payment terms.

Confidentiality, Supply and Development Agreements are all addressed, in the context of stages in the relationship and business with customers, and with the focus on practical issues.

There is a section on preparing for negotiations, which links effectively to other sales/negotiation training material.

The course is aimed at Key Account Managers, Sales and Commercial Managers, Product and Marketing Managers, Sales Engineers, Technical/Technical Sales Managers and their teams, and will also benefit Customer Service Managers.

It is equally relevant for specific sector and general business and should be an integral element of induction training for new starters in the above roles.

The training is a mixture of presentation, case studies and group participation, and delegates will leave with a comprehensive "tool kit" of material to apply in practice.

The material has been prepared based on real customer experiences worldwide over the past 5 years, with additional inputs from third party commercial and intellectual property lawyers and liability insurance specialists.

The course, tailored to our industry, will be delivered on Tuesday, 30 October 2018. Costs are £395+vat for members (£450+ vat non-members).



'Go ahead and sign, we sort the details out later.'

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In ever-evolving business such as the valve and actuator sector R&D is the key to competitive advantage and maintaining a strong market position

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Creating a culture of innovation amongst the workforce and developing new innovative solutions will enable you to be step ahead of other companies and able to adapt to your clients' needs. This however can tie up a sizeable amount of company investment and is the reason why innovation is often stifled or reduced from the initial idea or philosophy.

Leyton has been helping clients with this for 20 years.

We work with clients to understand all areas of R&D within their business and all of their production processes to identify areas where they may be able to access government funding or tax relief. It's not all about scientific experiments and academic theses - R&D can include a much broader set of activities initiated by an organisation directly or as part of a client project. Development and improvement of systems, designs, prototypes, software and processes can all be part of this, as well as the people requirements to make this work. Our technical consultants have saved companies millions of pounds in tax credits by breaking down the component parts and identifying new business areas where legitimate claims can be made.

How does it work?

- One client had 5 engineers working on a Project for BP in the offshore sector. Their engineers were designing, prototyping and manufacturing a new innovative product. Although paid-for by BP this was our client's R&D.
- We were able to save them 25% of the 5 salaries and they reinvested this into a new milling machine.

Leyton is delighted to be working alongside the BVAA, helping members explore opportunities to encourage greater investment in R&D and innovation. To find-out how we could support your business please contact Charles Precious - Tel: +44 (0) 20 3763 5190 or Mob: +44 (0) 7341731059

Back by Popular Demand - Casting Design for Valves



BVAA - in partnership with the Advanced Manufacturing Research Centre (AMRC) - are delighted to announce the return of training course, *'Casting Design for Valves'*



Coverage

The course will cover basic casting design principles, the building blocks to producing a good valve casting and how to improve product quality and recognise casting defects.

Course aims

The course provides design engineers, production, specification and procurement professionals with an in-depth understanding of the opportunities and constraints of a variety of casting processes. This will enable businesses to manufacture or source cast valve products to the most effective design.

Who should attend

The course is particularly suited to practising designers and procurement professionals, or methods engineers looking to gain or improve their depth of knowledge in producing valve designs suitable to be cast.

When & Where

To be held on Wednesday, 19th September 2018 at the AMRC facility in Rotherham, the day will also incorporate a 2 hour lunchtime visit to Casting Technology International (CTI). £330+vat.

More information

Contact BVAA on Tel: 01295 221270 or email barbra@bvaa.org.uk



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Kent Introl - Major Shutdown On Leading UK Refinery
Page 26-27

Langley Alloys - Competitive & Convenient
Page 32

Bifold's Circuit Designer - Modular Solutions, Drag & Drop Systems
Page 48

Precision, High-Quality & Simple to Use - H & S Tool Holdings
Page 67

Imtex Controls on Shut Down Valve Condition Monitoring
Page 28

Langley Alloys Invest in Stock
Page 30

WSG... The Sum of The Parts
Page 90

'Agile Supply Chain Crucial to Capitalise on Market' - ASL
Page 94

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Optimising Asset Integrity & Service Life – Qatari Case Study



Valve reliability is a fundamental factor in any operator's strategy to achieve optimal operating of life of its assets in oil & gas production

Over the past 3 months SVS has been working closely with one of its international clients in Qatar to conduct a regimented GAP Analysis across their valve standards and maintenance practices. This holistic analysis was to be executed in a two stage format; with Stage 1 centred around reconnaissance of information in order for SVS to appropriately establish the operator's existing maintenance standards to enable accurate diagnosis of the GAPs, and Stage 2 focussed on agreed execution of the GAP solutions.

The relative investigations of Stage 1 would be facilitated by two separate SVS personnel secondments to Qatar, in addition to regular e-communication exchange between the operator's discipline authorities and SVS, to comprehensively execute and conclude the aspect function. The work programs for the requisitioned visits to Qatar were as follows:-

Visit 1: Non-Intrusive Site Surveys

- Survey, data collection & in-situ observation of client's selected critical valves
- Gain definition of the full extent of valve maintenance currently executed at the assets
- Obtain work procedures / PMRs of relative maintenance practices for review
- Identify methods of data logging for maintenance results
- Probe into any significant historical valve failure events/ incidents at site which may shape the project GAP solution
- Obtain clarity on the valve greasing/preventative maintenance products currently utilised aboard the assets
- Identify any limitations in the execution of current / prospective future maintenance at the sites

Visit 2: RCA (Root-Cause Analysis) Investigations of Failed Critical Valves

- Study of valve failure mechanics to aid in the identification of weaknesses / GAPs in client valve specifications
- To grant client staff further literacy of tell-tail signs leading to issues/failures in their valves
- To assess the functionality & integrity of the OEM design of the valves in question
- Corroborate maintenance findings recovered from Visit 1
- To enable SVS to obtain further understanding of client's valve problems and aid in failure pattern recognition, building into the final GAP solution

Comprehensive analysis of the investigative findings has enabled SVS to accurately diagnose the GAPs in our client's valve standards & maintenance practices and devise a bespoke strategy to execute and enact our recommended GAP solutions in project Stage 2.

The final intended output deliverables of the scope are a suite of modernised valve specifications & datasheets, appropriately amended in-line with the Stage 1 investigative findings, and development of a one-stop Valve Maintenance Strategy formulated specifically to our client's asset requirements and performance standards to promote optimal service life of their valves.

A proactive preventative maintenance regime is essential to achieve optimal service life of a valve.

The concept of preventative valve maintenance in general is simple; making valves operate better for longer.



This concept has a number of far-reaching benefits to operating assets in the long term:-

- Enhancing safety – reducing the risk of valve failure and unscheduled outage/shutdown
- Cost saving – reducing the need for frequent valve replacements
- Reducing the need for planned shutdowns – with most preventative maintenance practices being performable in live operating conditions
- Reducing fugitive emissions – via valve leaks/weepers

SVS is committed to steering our clients towards an attitude of loss prevention rather than mitigation. Through experience, proactive maintenance of mechanical equipment in general is often regarded as a 'nice to do' at many operators and commonly falls by the wayside in terms of function priority at operating assets. SVS has sought to demonstrate value in this method of approach in recent years; aided through our exposure to RCA / Failure Investigation of client equipment we've been able to identify a vast range of failure mechanics relating to dated equipment specifications and incorrectly applied maintenance practices, or the absence of proactive maintenance in general. As a result, valve specifications and the maintenance approach at our client operators have been modernised under our care.

To find out more about valve maintenance strategy and our other value-added technical capabilities please visit our website: www.svservices.com or contact us directly: sales@svservices.com



Tel: 01224 278 840
Email: sales@svservices.com
Web: www.svservices.com

Rotork Completes Automation Contract to Assist Decarbonisation at Lynemouth Power Station



Rotork has completed a contract to supply fully automated pneumatic control systems on high capacity biomass rail freight wagons supporting the decarbonisation project at Lynemouth Power Station in Northumberland

Rail freight manufacturer Astra Rail/Greenbrier Europe and leasing company Nacco have supplied GB Railfreight with 50 hopper wagons to support the biomass haulage contract awarded by Lynemouth Power Ltd. Each with a payload of 70 tonnes, these auto-loading and discharging wagons run in two rakes (coupled groups) of 24 between the Port of Tyne and Lynemouth Power Station, delivering 37,000 tonnes of biomass per week.

The Rotork design for auto-loading and discharging enables all controls, hand valves and visual indicators to be located in one place, providing safe and convenient access.

Top and bottom hopper doors are operated by a magnetic sensor valve from a lineside magnet. The innovative design allows any wagon in the rake to be the arming wagon.

The fully automated control system enables quicker loading and unloading, requiring only supervision without manual intervention during operation. The proven design also allows for wagons to be separated and used in other rakes without any further configuration.

Lynemouth Power Station has generated electricity since 1972. The plant was originally built and operated by Alcan with the purpose of providing safe and secure energy for the production of aluminium at the adjacent Lynemouth Smelter.

The station ceased burning coal in 2015 and has now been converted to burn sustainable biomass, enabling the supply of up to 390 megawatts of low carbon electricity to the National Grid, enough for 450,000 homes.

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BREAKING NEWS

- VALBIA Aluminium Electric Actuators are now **RINA Approved** to Regulation for Classification of Ships - Part C Machinery, Plants & Fire Protection - Chapter 3, Section 6, Table 1. Certificate No ELE170116CS.

- Also now Approved to **Military Shipbuilding Standards** NAV-30-A001 and MIL-S-901-D and includes Powder Coating Resistant to Salt Spray Testing of 500 Hours and Anti-shock Tests

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Langley Alloys 80th Anniversary



As 'The Home of Super Duplex' reaches our 80th anniversary, Langley Alloys has completed a comprehensive upgrade of our UK site, optimising the stocking and processing capability, following 12 months of continued investment.



This year marks not only our 80th anniversary, but also one of the busiest in the company's history. Our roots date back to the development of unique alloys for naval and airplane applications in the 1930's and 40's, with our alloys used in the engines of Spitfires. We are also responsible for the development of Ferralium® 255-SD50 and Hiduron®, high-performance alloys widely used in demanding applications for oil & gas, naval and subsea applications. After relocating to Stoke-on-Trent in 1996, Langley Alloys has operated from its current purpose-built facility since 2008.

In the last 12 months, we have invested in four new saws, including three large Kasto saws operating carbide blades necessary for processing higher-strength nickel alloys. The latest stage of the site upgrade includes additional racking for bar stock, accommodating our increased stockholding of 25%, together with dedicated racking for goods inward and despatch to match our higher activity levels.

We also announced a partnership with Sandvik as their UK partner for the distribution of duplex and super duplex stainless steel solid bars. The addition of their Sanmac™ 2205 and SAF2507™ to our product range has seen a significant uplift in activity, end users appreciating the enhanced machinability as standard from the Sanmac™ material.



As UK partner for Zollern GmbH forge and foundry, we are also seeing opportunities to share their pattern-less casting capability and high-quality in complex alloys with our customers.

As the 'Home of Super Duplex', our stock levels have grown to ensure the depth and choice of sizes needed to support demand from BVAA members as the market recovers. Additional investment has seen our nickel alloy range broadened to now include Alloys 625, 725, 825 and 925 in support of 718 and K-500, together with smaller diameter Alloy 254.

Although it's been an incredibly busy period, the development story does not end here. We hope to share further announcements with the BVAA membership in the next edition of Valve User.



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Web: www.langleyalloys.com

Air Preparation: an Alternative to the Obvious Choice?

In addition to the popular Sitecna stainless steel air preparation & flow control valves, Measure Monitor Control also offer aluminium versions of filter regulators, filters, pressure regulators, volume boosters & lock up valves from the same Italian factory



The aluminium versions have the same elastomer options to suit all common gases and operating temperatures down to -55°C, size range: 1/4" - 1" (1/4" only for the lock up valves) and are suitable for ammonia applications such as in fertiliser plants due to their copper free alloy construction.

For use on flammable or toxic gases, threaded relief ports are standard on the pressure regulators and filter regulators with options for non-relieving operation if preferred. The volume boosters also offer threaded exhaust port options up to 1" size for the same media, removing the need for customers to thread the standard plain exhaust ports and pipe each away to safety.

The filter regulators, pressure regulators and volume boosters have been third party tested and carry certified compliance with IEC 61508 for use in SIL3 Functional Safety systems. This is standard and not an additional cost or option.

Standard on all products is ATEX and GOST Ex certification for use in potentially explosive atmospheres, assuring plant safety in a market where confusion remains regarding non-electrical compliance among some manufacturers. GOST EAC and dual language nameplates complete the standard certification and 3.1 material reports are available for all these aluminium products as an option.

Where low installed weight is critical, these products offer the same functionality as the stainless steel versions with maximum inlet pressures up to 25bar, the same envelope dimensions and around half the weight. Corrosion resistance is provided through the white epoxy coating and offshore type double coating specifications can be achieved to comply with project demands.

Next time stainless steel is specified for the valve instrument package, there is an alternative that offers



the same performance and lower cost with all the certification safeguards needed. Using aluminium instead of stainless steel for the air preparation offers cost savings that can allow budgets to be balanced in favour of more critical components and prevent overruns. Isn't that an idea worth considering?



Tel: 01443 772 500
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Web: www.measuremonitorcontrol.com

Our apologies...

In the previous issue (45) on page 74, Parker Hannifin's contact details at the bottom of their "Parker Completes Range of Double Block & Bleed Valves for Oil & Gas" should have read:

Tel: 01271 313131
Email: ipd@parker.com

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Our products are used across a variety of industries such as Oil & Gas, Industrial and Chemical industry to name but a few. To the left, we have listed the more common valves all of which benefit from the use of PTFE components.

Maceplast UK Ltd offer outstanding customer service with emphasis on quality, reliability and innovation. To see the full extent of our range of products you can always visit our website or make contact via email or telephone.

Valve Type	PTFE Application
Gate Valve	Lining materials, Packing, Gasket
Globe Valve	Lining material, Packing, Seating material
Pinch Valve	Flexible reinforcing jacket, Grommet
Diaphragm Valve	Body, Diaphragm material
Needle Valve	Body, Bonnet
Check Valve	Lining material, Body, Ball, Gasket
Pressure Relief Valve	Lining material, Plug, Seating material
Control Valve	Lining, Seating material, Packing, Bellow, Diaphragm, Gasket, Piston, Poppet, Sealing elements



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PED Approval for raw material suppliers, Special Quality Alloys Ltd



Special Quality Alloys Ltd have successfully been granted the Pressure Equipment Directive (PED) 2014/68/EU approval

The approval applies to the design, manufacture and conformity assessment of stationary pressure equipment with a maximum allowable pressure greater than 0,5 bar.

The Pressure Equipment Directive aims to guarantee free movement of the products in its scope while ensuring a high level of safety.

Group Quality Engineer, Gemma Hopper explains the drive behind the application: "Through our continuous quality improvement programme, we are committed to providing our customers with the highest standard of products and services. We identified an opportunity to increase our portfolio of approvals and through a well-organised team effort we were really pleased to be granted the certification."

Scott Goulding, Technical Manager summarises: "Following the application, an audit took place which verified the submitted documents and questionnaires against our current manufacturing process. This was all very well received and the approval was granted with no non-conformances raised."

The scope of the approval will cover the manufacture of open die forgings up to 4000kg in a range of grades from Carbon, Alloy, Stainless, Duplex, Super Duplex, Nickel, Cobalt, Titanium, and Copper based alloys.



EC CERTIFICATE OF QUALITY SYSTEM APPROVAL

In accordance with the requirements of the Pressure Equipment Directive 2014/68/EU and the Pressure Equipment (Safety) Regulations 2016, UK Statutory Instrument 2016 No. 1105

This is to certify that the Quality Management System of:

**Special Quality Alloys Limited,
Continental Works, Bessemer Road, Sheffield, United Kingdom**

Has been assessed against the requirements of Annex I, paragraph 4.3 of the Pressure Equipment Directive 2014/68/EU, and Schedule 1, paragraph 4.3 of The Pressure Equipment (Safety) Regulations 2016 and conforms to the requirements for the products shown below:

Manufacture of Open Die Forgings up to 4000kg in Steel, including Carbon, Alloy, Stainless Steel, Duplex, Super Duplex Alloys, Nickel, Cobalt, Titanium and Copper Based Alloys

Approval is subject to the continued maintenance of the quality system in accordance with the requirements of the above Directive and Regulations, and continuing to comply with the surveillance schedule. Quality System Approvals are as listed on the attached schedule.

Certificate No: PRJ11070887/1
Original Approval: 08 March 2018
Current Certificate: 08 March 2018
Certificate Expiry: 07 March 2021
LRV Notified Body Number 0038

on behalf of Lloyd's Register Verification

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Oxford Flow announces trial successes in Mexico

Oxford Flow, the pressure control equipment specialist for the water, oil and gas and industrial process industries, has achieved qualification for its water pressure regulating valve (PRV) with Servicios de Agua y Drenaje de Monterrey (SADM), the potable water distribution company for Monterrey Municipality in Mexico, following two successful field trials.



SADM was facing a challenge to fill and accurately control the water level inside storage tanks at very low upstream pressures. Its incumbent valves were not delivering the required inlet flow or shutting off drip tight – resulting in costly wasted water through overflow, frequent and costly manual interventions and operational shutdowns.

Chosen for its reliable operation at very low pressures with minimal head loss, the innovative IP150 PRV technology was also trialled in Monterrey's water distribution network. The PRV met all performance criteria during the trial including; low upstream pressure operation, low head loss (2m H²O) and smooth opening / closing transition to minimise pressure surges.

Florentino Ayala, SADM Technical and Operations Director said: *"This is the first time in 25 years of working with water PRVs, that I've seen a valve control the tanks and distribution network at very low pressures. Oxford Flow's technology will avoid manual interventions and enable improved efficiencies through automated filling and control. This is such a simple and cost-effective solution that will really transform our daily operations."*

Neil Poxon, Oxford Flow CEO, says: *"These field trial successes represent a significant milestone for Oxford Flow. By proving our technology in the Americas, it opens a new market for us. During the trials, we have learned more about how our PRVs operate, which will allow us to build our future offering. Our next step is to continue our growth in the Americas through select trials."*

Oxford Flow has already won 25 projects this year. Due to its continued success, the company has expanded into new headquarters in Oxford, UK and aims to hire 10 employees by the end of the year.



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Bernard Controls Launch New Quarter Turn Actuators



As the UK Agent for Bernard Controls, Zoedale Ltd is pleased to offer this exciting new development in the world of electric actuation

////////////////////////////////////

The Bernard Controls AQ range of affordable electric actuators with an optimised design are IP68 / NEMA 4X weatherproof with a torque output of 15Nm to 500Nm with multi-frequencies and multi-voltages. They cover temperature ranges from -20°C to +60°C (with -40°C as an option) and all come as standard with a corrosive industrial polyurethane paint finish and aluminium housing to ISO standards.

This range of actuators are easy to use, easy to set up and with easy commissioning for all versions (and a pre-wired version available).

Depending on the environment and application specifications, there are a multitude of configurations available to suit most requirements.

Essentially, the Bernard Controls AQ Range is available in 3 control options; Switch, Integrated LOGIC and LOGIC Positioner: A super compact Switch option without a handwheel and torque output from 15Nm to 70Nm through to the LOGIC Positioner equipped with a large rotatable LCD display and Bluetooth communication as standard that is Fieldbus compatible.

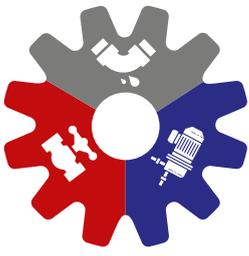
These actuators are highly flexible to suit many demands, whether that be for common flow control in a thermal power plant, a water treatment plant, ventilation systems or any other industrial applications, whilst being sure of their safety, efficiency and reliability.

Standard versions are available from stock at just £211.

////////////////////////////////////

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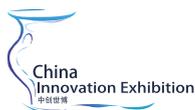
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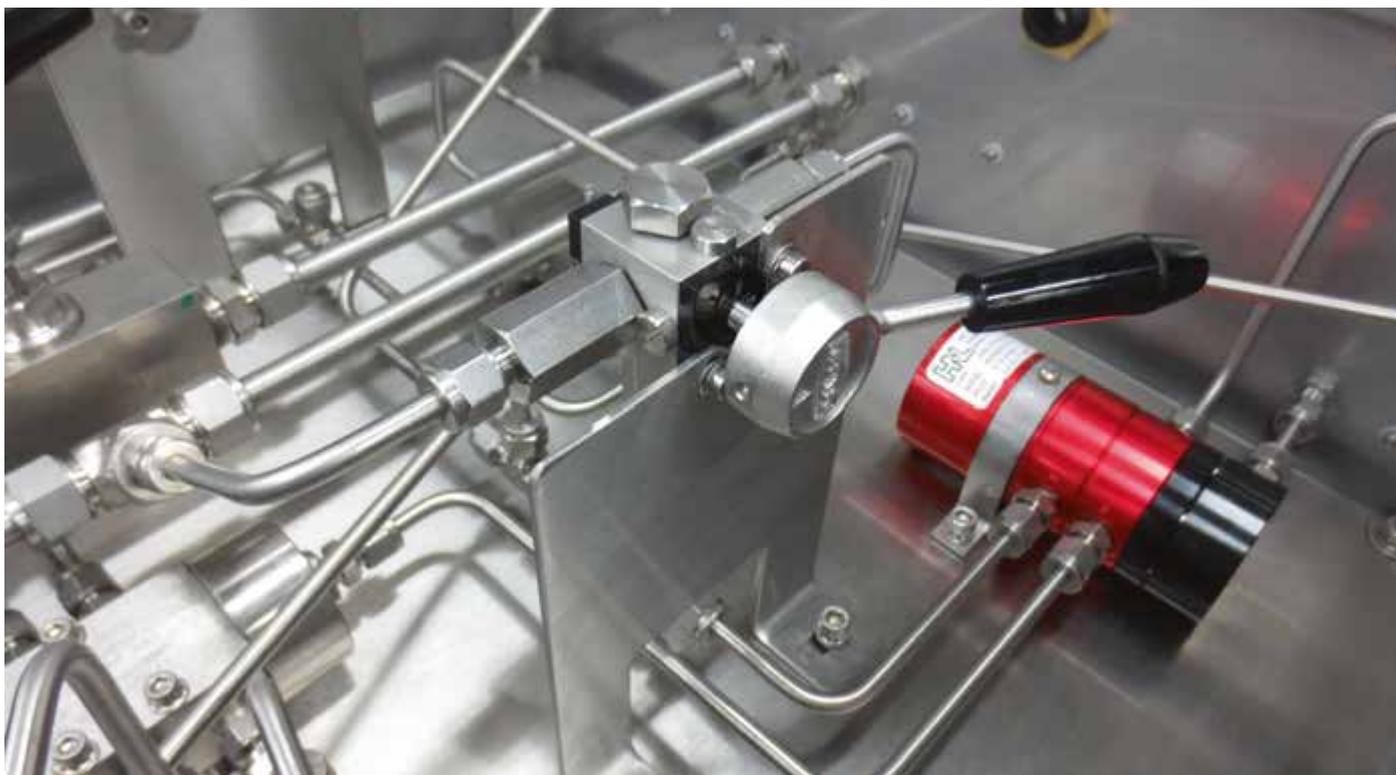
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Slam Shut Cabinets - Drallim



In 2009 National Grid Gas awarded Drallim Industries the contract for the manufacture of Slamshut Cabinets for their countrywide replacement program. The duration of the contract was seven years with a value of three million GBP

The cabinets, of which there are sixteen variations, in conjunction with Slamshut valves, monitor the gas pressure and rapidly cut the flow of gas when the pressure in the system exceeds the set point and avoids overpressure conditions.

National Grid had a large number of slam-shut control systems operating on twin-stream and triple-stream Pressure Regulating Installations (PRIs). Many installations were over 25 years old and required replacement to ensure that safety systems were kept in good order.

A number of different designs were in operation, all of which performed the same function but varied slightly.

In order to achieve the benefits of standardisation National Grid opted for one particular system design as a replacement.

The system is an up-graded version of the original Select-a-Stream which was designed in the East Midlands in 1989.

'Select-a Stream II' is a system of slam-shut stream selection designed and developed by National Grid and manufactured by Drallim Industries. It has been developed from, but is not identical to, the original 'Select-a-Stream' systems that were used within East Midlands Network of National Grid.

The system consists of a control cabinet for each regulator stream. For each installation one cabinet is designated as the 'Master'.

The control cabinets for the other streams differ slightly from the 'master' in their internal pipework and are designated as 'Slaves.'

The principle of operation for a two-stream installation is as follows:

When the station outlet pressure rises, the lead stream slam-shut will close when its set point is reached. If the outlet pressure continues to rise, the slam-shut on the standby stream will then close.

If the outlet pressure subsequently falls, the standby stream slam-shut will reopen to maintain gas supplies. If the outlet pressure again rises above the set point (e.g. If the standby stream is faulty), the standby stream slam-shut will again close and will not reopen. If the outlet pressure falls again, the lead stream will now reopen to maintain gas supply. Should the outlet pressure rise above the set point yet again, the lead stream slam-shut will again close and will not reopen.

The principle for three stream operation is exactly the same. The streams will close in ascending order of set point. When all streams are closed, should the outlet pressure fall, the last slam-shut to close will reopen first. Each stream will only re-open once.

It later became apparent that the customer specified 3-way ball valves, although of superior quality, had begun to fail in the field. This occurred at low temperature due to cross port leakage; a well known Achilles heel of even the best multi-port ball valves. This caused the Slamshut valves to trip and close at the wrong time, a very unwelcome outcome on a mains gas pipeline. Drallim Industries offered an easy retrofit solution utilising their own Rotary Selector Valve (RSV) which has much more reliable cross port sealing in demanding applications. After passing low temperature tests at -40°C, a special variant was produced with matching interface dimensions to that of the failed ball valves.



'Drallim Industries offered an easy retrofit solution utilising their own Rotary Selector Valve (RSV) which has much more reliable cross port sealing in demanding applications.'

This replacement program was approved by National Grid Gas. Drallim was awarded the contract to rectify the issue and modify the built units with a further value of 1.2 million GBP.

Since the completion of the projects Drallim Industries have been given a Licence Agreement by National Grid Gas (now known as Cadent) to promote, manufacture and supply Slam Shut Cabinets of this design to other Gas Networks which has proven successful.



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Get a Free Safety Cable Kit With all QK Chain Wheels



Due to the significant interest and subsequent sales volume of QK chain wheels Quickkits have taken the decision to supply FREE safety cable kits with all chain wheels supplied

Quickkits highly recommend that a safety cable be fitted to all chain wheels as a preventative safety measure.

Commenting on this decision Group General Manager, Mick Durkin says, "Due to the ever increasing sales of QK chain wheels the management at Quickkits have taken the decision to absorb the cost of these safety cable kits. Health and Safety is paramount to our business and we hope to extend this out in the field by not charging the customer for something that we deem to be a standard requirement."

Quickkits stock a vast range of both clamp-on and direct mount versions available for same day dispatch. The clamp on style back plates can also be customised by laser cutting the customers logo in them should this be required.

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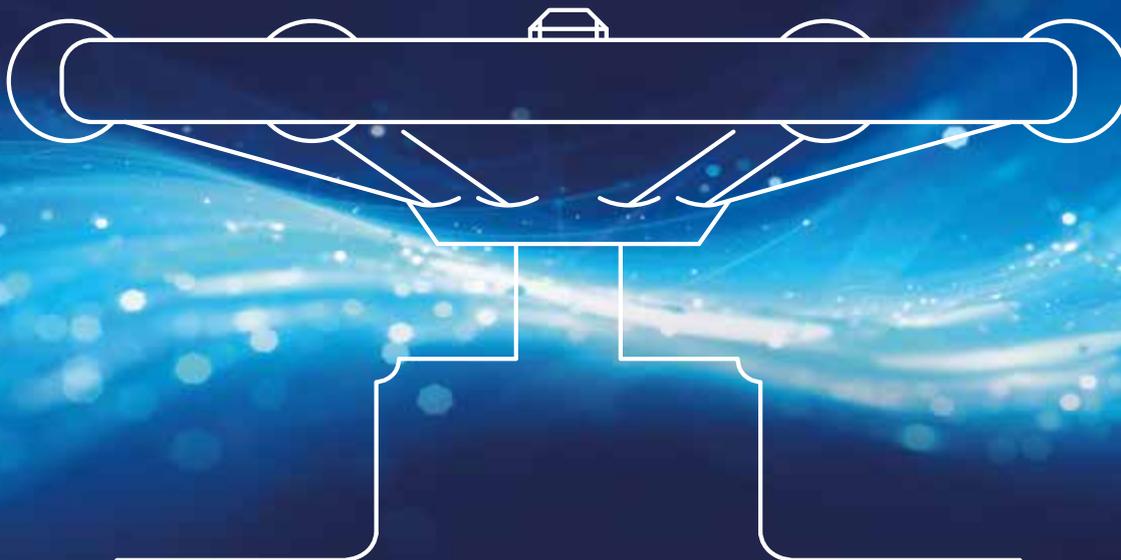
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Easing the pressure: Veolia tackles water regulation with Oxford Flow



Water services provider tackles the weighty challenge of pressure regulation

Providers of water management services strive to help businesses reduce costs and improve the efficiency of their water and wastewater infrastructures. However, their success depends on effectively tackling the challenge of water pressure regulation and head loss. All too often, this entails having heavy and cumbersome technology, which restricts the installation options and creates unwanted operational challenges.

Veolia was one company facing this very real problem. Its Mobile Water Services Division is a market leader in the provision of onsite purified water services from purpose-built HGV trailers to industrial processors and plants across the UK and Europe.

In pressure management, too high an outlet pressure creates a huge risk of damaging expensive assets. However, insufficient outlet pressure could result in the failure to fully purify the system, which could reduce the quality of products or processes. Veolia recognised that accurate pressure control, from the hydrant supply through to the purification system and into the client's system, was vital to delivering an efficient service and maintaining customer satisfaction.

James Carr, European Operations Director - Mobile Water Services at Veolia Mobile Water Services, said: "Our equipment needs to connect to many different customer utilities, which means lots of pressure differentials and varying flow rates. At the time, this was challenging to manage and posed a risk to both our and our clients' equipment."

A weighty burden

Veolia had to regularly manage very large pressure drops, which meant having two pressure reducing valves (PRVs) to reduce the pressure over two stages.

The problem was that the two separate products added up to some more than 100kg of equipment on their trailers, which reduced portability and increased the kerb weight of the trailers. Instead, it needed a provider to help it develop and deploy a more mobile and accurate solution for hydrant PRV assemblies.

The company turned to Oxford Flow, the manufacturer of innovative pressure control equipment, including the world's first polymer PRV. James Carr explained: "The valves we'd been using were extremely heavy, making installation tricky and expensive. We'd been looking for a solution to this issue for a long time, and Oxford Flow's PRV offered a new approach because it was made of polymer and far lighter than all other comparable devices. We knew this would make installation much easier and greatly reduce our labour costs."

The PRVs came with integrated handles, supports and quick-fit connections, meaning Veolia could easily install them. Often, companies rule out any kind of pressure regulation in hard to service infrastructures or – in Veolia's case – have managed with heavy duty setups. However, Oxford Flow's flexible and simple design makes pressure regulation far more accessible and cost-effective.

More streamlined, better performance

The rugged light-weight design of Oxford Flow's products allowed for easy adjustment of the set pressure as well as control of the speed of response. This made it much quicker and more efficient to set up and deliver precisely controlled pressure and flow exactly to the customer specifications.

Because weight was a big issue, Veolia had been looking at ways to reduce the size of its trailers.

In particular, it wanted to fit more of its processing fluid onto the vehicles but without increasing the weight.

A major advantage of Oxford Flow's products was that Veolia was able to streamline its infrastructure from two PRVs weighing some 60 kilos each to just one PRV weighing around 25 kilos. As a result, it had a much more efficient solution that could reduce from a very high pressure in just one stage.

In addition to reducing the number of PRVs and overall weight, Veolia could increase its performance. Often, maintaining high performance at the lower end of the pressure spectrum can be a challenge. However, Oxford Flow was able to deliver market-leading head loss performance. James Carr added: "Because pressure can be controlled with such precision by these devices, there is reduced hunting. Flow turbulence and head-drop are also minimised – and we've found it less noisy too."

Reducing costs was an important outcome for Veolia. One valve meant more manoeuvrability and potentially less labour to manage it. In addition, saving more than 50 per cent of the weight of installation had major implications in terms of fuel consumption so, with less to carry around, Veolia could reduce the overall carbon footprint of its trailer.

A change of tide

Neil Poxon, CEO at Oxford Flow, added: "This assembly used Oxford Flow's IP series PRVs, which are ideally suited to water distribution companies in potable water network field trials across Europe."

"The PRVs are manufactured using WRAS-approved Acetal resin, making it considerably lighter – it can weigh as little as a tenth of that of the competitors' PRVs. This massive reduction in weight has allowed us to permanently fit quick-release connections to the unit to enable rapid deployment on-site."

Ultimately, working with Oxford Flow has allowed Veolia to develop a more competitive water management offering. The real breakthrough was discovering that just one PRV could handle the pressure regulating flow rates that previously required two PRVs.



Neil Poxon, CEO, Oxford Flow

This opened opportunities for new ways of working and could enable many more companies to access pressure regulation services for perhaps the first time.



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How SmartAct Plans to Save the World



Electric Motors consume around 48% of all the world's electricity



They are all around us in a myriad of applications and devices. When electricity was cheap (and when copper was cheap) this did not really matter too much.

The Smart Actuator Company presented a paper at the 2014 BVAA Conference to explain how the core RIFT Technology in their electric motor drives could give energy savings of 75% or more when compared to older design competitor products.

After 4 more years of sales and feedback from distributors and end user customers SmartAct® can back up the original bench testing results with practical field experience of the difference those energy savings can make to their customers. Some examples of the comparisons with competitors are shown on the table below,

Energy Savings compared to Competitor Products (for 90-degree part turn)

	Output Torque (Nm)	Speed (Seconds)	Weight (Kg)	SmartAct Saving (%)
SmartAct® 40-100	40-100	2 or more	1.9	-
Competitor 1	63	22	7	86.3%
Competitor 2	90	17	12	80.02%
Competitor 3	100	9	11	91.43%
Competitor 4	108	90	25	88.83%
Competitor 5	90	26	25	98.56%
Competitor 6	85	35	3	81.48%
Competitor 7	80	13	7.4	95.04%

As well as the obvious electrical energy cost saving calculations there are often practical benefits such as the reduction in supply cabling specification to power the units and even the flexibility to be completely 'off-grid' and be supplied with power from solar panels and/or external battery storage.

How does the energy saving come about?

RIFT Technology uses the well-known and well understood science that generally small motors are more power dense than larger motors.

For most of us the most power dense motor we ever use is in our laptop or PC. If we are less fortunate it will be in our dentist drill when we are suffering in the chair!!

Combining small motors and collecting their torque output to a central shaft allows this greater power density to be utilised.

The possible Global benefits of RIFT Motor Technology

A disruptive technology capable of reducing electric motor energy consumption by 75% or more could reduce world electricity demand by more than a third.



This potential has brought about projects which the SmartAct® and the RIFT Driven® team are working in currently with a variety of partners to develop new products in the following applications,

- Electric Motors for Pumps
- Traction Drive Motors for Electric Utility Vehicles
- Small Wind Turbines
- Traction Drive Motors for Cars and Vans

By a simple maths calculation. If 48% of the world electricity is consumed by motors and RIFT Driven® motors could reduce that consumption by 75% or more then the world electricity need would drop by 36% if all those motors were converted to RIFT Technology designs.

The team at SmartAct®/RIFT Driven® have plenty of work ahead of them to help make this massive change to the world electricity demand.



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WRAS Approval Renewed for Swing Check Valves



T-T Flow is delighted to announce that they have been awarded accreditation from the Water Regulations Advisory Scheme Ltd for their full range of Swing Gate Valves

WRAS contributes to the protection of public health, by preventing contamination of public water supplies and encouraging the efficient use of water. This is achieved through promoting and facilitating compliance with the Water Supply Regulations and Scottish Byelaws. These require that a water fitting should not cause waste, misuse, undue consumption or contamination of the water supply, and must be 'of an appropriate quality and standard.'

WRAS approval is granted directly by representatives of the water suppliers and is accepted as evidence of compliance by every water supplier in the UK. To qualify, the full range of Swing Check Valves has undergone rigorous testing procedure for the approval.

The now fully WRAS approved Swing Gate Valves (DN50-DN300) offer epoxy coated ductile iron bodies and metal to metal seal for vertical and horizontal installation. These models are available with an optional external weighted arm. This valve is used to prevent reverse flow and is suitable for potable water, wastewater and sewage applications.

Peter Hindley, Commercial Director at T-T, comments, "We are pleased to gain this approval as we have worked hard to ensure that our Swing Check Valves are of the highest quality. This approval means that these valves have undergone mechanical and water quality testing to avoid contamination of the water supply."

T-T work hard to ensure all products are of the highest quality and continually work to demonstrate compliance with regulatory bodies. WRAS approved products can be identified through the WRAS logo displayed on product pages.

To find out more about our WRAS accreditation, our range of Swing Gate Valves or to speak to a member of the technical team, contact us on +44 (0) 1630 647200 or via email at response@ttpumps.com



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SIL3 Certification for the EHPC210 Diagnostic Controller



Bifold is pleased to announce that the Partial Stroke Function of the EHPC210 Diagnostic Controller is now SIL3 Certified according to IEC 61508 : 2010 Parts 1-7 and meets requirements providing a level of integrity to: Systematic Integrity: SIL3 Capable

In obtaining the SIL3 certification, Bifold Orange partnered with Exida, a global supplier of functional safety products, services and certifications, which has performed more process control safety certifications than any other company worldwide. Exida certified the product reliability, design and engineering processes for the Bifold Orange EHPC210 Universal Controller as SIL3 capable per International Electrotechnical Commission (IEC) 61508.

The EHPC210 is a smart controller solution operating a single solenoid for partial stroke testing in pneumatic and hydraulic valve actuation. It is designed to meet the basic legislation requirements to perform a partial stroke test and to record the results.

The controller can interface with a valve switch box or has the added benefit of integral position feedback. The EHPC210 can be retrofitted onto existing systems to allow partial stroke testing to be performed. The controller incorporates graphic display integrated rotary feedback measurement, low power modes, ESD monitoring and control. The enclosure assembly allows installation in zone 1 or zone 2 hazardous areas.

The controller features HART and Modbus communication as well as fully configurable control logic allowing hard wired interface to a local control panel or the clients control system.

The controller records the time, valve position and pressure at the actuator (separate pressure transmitter required). It uses this data to provide a graph for local visual indication, actual safety factor calculation and alarm status.

Using the controller in association with Bifold zero bleed (in steady state position) solenoid technology can improve valve control, system power efficiency and reliability.

'The EHPC210 can be retrofitted onto existing systems to allow partial stroke testing to be performed.'

To view or download the certificate in more detail please visit: www.bifold.co.uk

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Even in the earliest days of the industry, oil and gas production has tested human ingenuity to the limits, thanks mainly to the often remote or inhospitable environments where reserves are found – from the sub-zero temperatures of remote Siberia, to the deep water wells of the Gulf of Mexico, to the desert temperatures of the Middle East

With increasing global demand for oil and gas, as well as the competitiveness of the sector, pipeline failure is simply not an option. For this reason, engineers are looking to specify innovative equipment which can handle the challenging environments and more importantly, guarantee reliability.

IMI CCI's Mike Semens-Flanagan outlines the important role choke valves play in maintaining effective energy production in oil and gas reserves, and also looks at a new innovative range of choke valves which have been designed to manage application issues with wide rangability.

Increasing drilling activities have amplified the demand for oil and gas pressure control equipment, with choke valves performing a vital role in controlling the flow of the fluid exiting wellheads. Choke valves serve to stop pressure from the reservoir and regulate the downstream pressure in the flow lines.

They are ideal for severe applications and for tackling issues such as: high pressure drops; high flowing velocities; corrosive fluids; H₂S; CO₂; low temperatures; steam injection; and wells with heavy erosion potential. Malfunction or failure of a choke valve can severely compromise safety, production and the environment.

There are a number of issues that can cause a choke valve to prematurely fail. Velocity for example can cause body, trim and piping erosion, while corrosion is a significant reason valves may fail. Commonly it can be associated with the choice of wrong materials, and it's worth bearing in mind while one well may produce CO₂ another will not and this can ultimately speed up corrosion.

A wellhead choke controls the surface pressure and production rate from a well. The type of choke selected will depend on reservoir pressure, tubing size, amount of gas, and amount and density of liquids.

A common mistake is to use a choke valve based on the history of an area or region, it must be acknowledged that one well may differ from another. For this reason, a 'one size fits all' approach for choke valves for the oil and gas sector is not a possibility given vastly differing operating conditions encountered in fields in different parts of the world.

IMI CCI's choke valves are designed relevant to the region and tailored to the harsh conditions found in its extraction facilities. For example In the Middle East region's oilfields the oil extracted frequently contains high quantities of gas – up to 8 per cent H₂S (or 'sour gas') and up to 4 per cent CO₂ (acid gas).

The gas content, when coupled with the typical operating temperatures of -40°C to +50°C, can create significant challenges for choke valves in the form of corrosion, in an application where sudden or catastrophic valve failure cannot be countenanced.

*'They are ideal for severe applications
and for tackling issues...'*

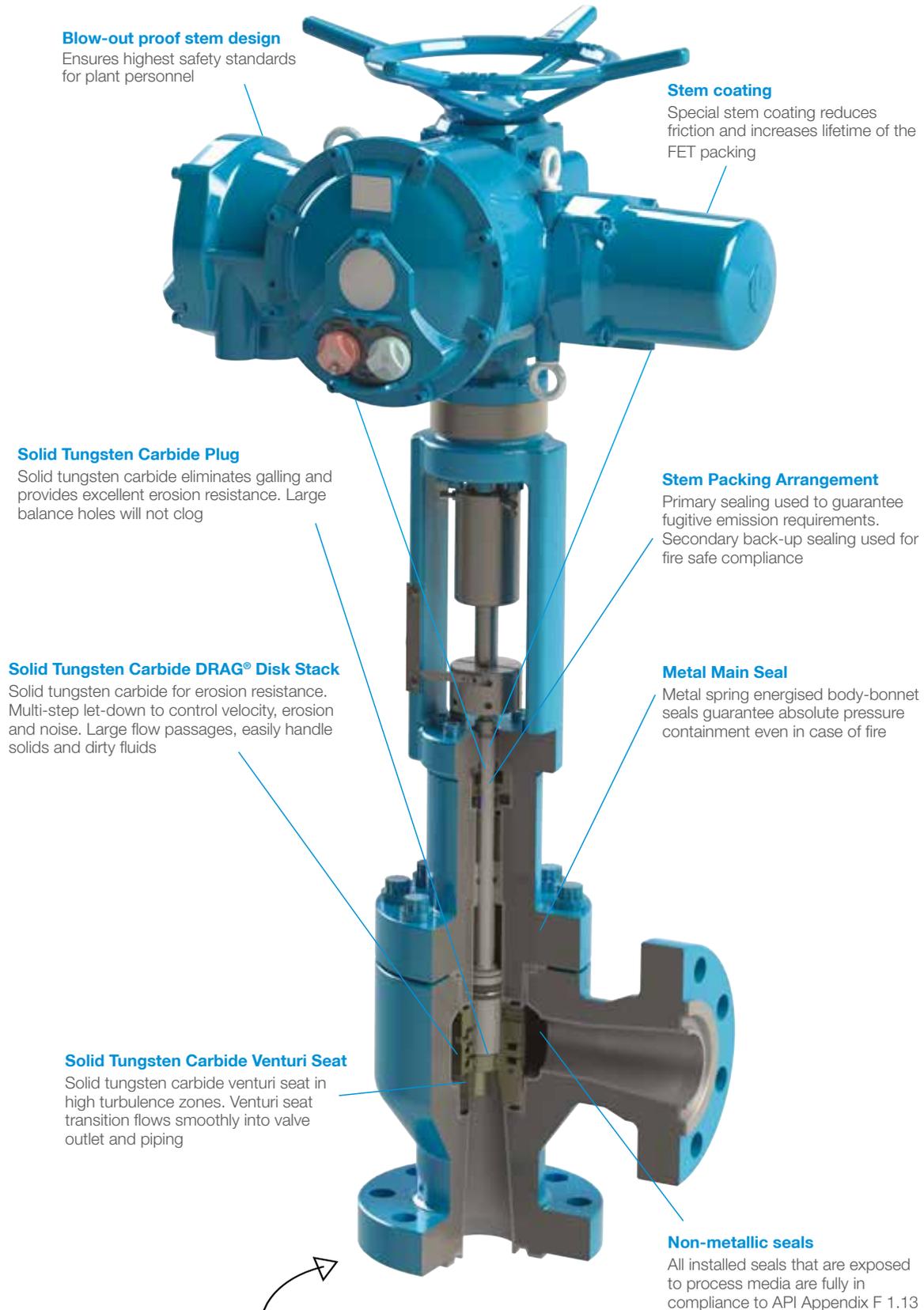
As a leading manufacturer of critical flow control solutions for the global oil and gas industry, IMI CCI plays a key role in facilitating the safe extraction of oil and gas from the most difficult fields around the world.

To address the issues typically associated with oil and gas exploration in the Norwegian region, IMI CCI, undertook detailed research of current choke valves operating in these applications and customer opinions to truly understand these issues and set the benchmark for the next generation of choke valves.



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Economies of Space, Time & Cost in Fan Coil Units



Albion UK (Ltd), a leading UK valves supplier, is urging building services engineers to consider specifying a combination of PICVs and Monolink units in air conditioning systems to save on installation time, commissioning, space and ultimately cost

Fan coil units power air conditioning systems in residential, commercial and industrial buildings and play an essential role in ensuring a constant, comfortable temperature and good indoor air quality.

The units are typically wall or ceiling mounted and space is always an installation issue for engineers. The units are usually required to be installed out of view and the diffuser or grille is set flush against the wall so not to detract from the aesthetics of a room.

For building services engineers these installations entail fitting multiple and complex connections in a confined space, which can either enhance or detract from the overall efficiency of the system.

The Monolink unit however helps take away the headache of fitting multiple components into a restricted space. It is a preassembled factory tested valve arrangement, designed in a simple and highly compact H block unit, suitable for a wide range of pipe connections.

The Monolink's structure offers a reduced risk of leakage and minimizes space required to connect to the system, and the configuration allows a quicker and easier installation process for the engineer. The Monolink assembly also comes with a 5 year warranty offering greater peace of mind.

When specified with Albion's new range of Pressure Independent Control Valves (PICVs) the combination is ideal for the automatic balancing of both heating and cooling systems.

It is particularly compatible to fan coil units and chilled beam applications where the reduced dimensions and compact design are hugely beneficial, and can withstand temperatures from -10°C +120°C.

Albion Valves (Ltd), Sales Director Les Littlewood commented: "This configuration takes the stress out of ensuring all valves and components fit. In addition, PICVs are recognised in the industry for improving energy savings by optimizing the distribution of water in a heating or cooling system, so ultimately maintaining an intended temperature at optimum energy efficiency at minimum operating cost.

From the perspective of a design engineer, not only do they gain energy savings as a result of increased control and valve performance from the PICV, they also achieve reductions in design and calculation time. Meanwhile contractors, installers and commissioning engineers experience lower costs from installation and commissioning simplification by using the Monolink. So a winning combination! "

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

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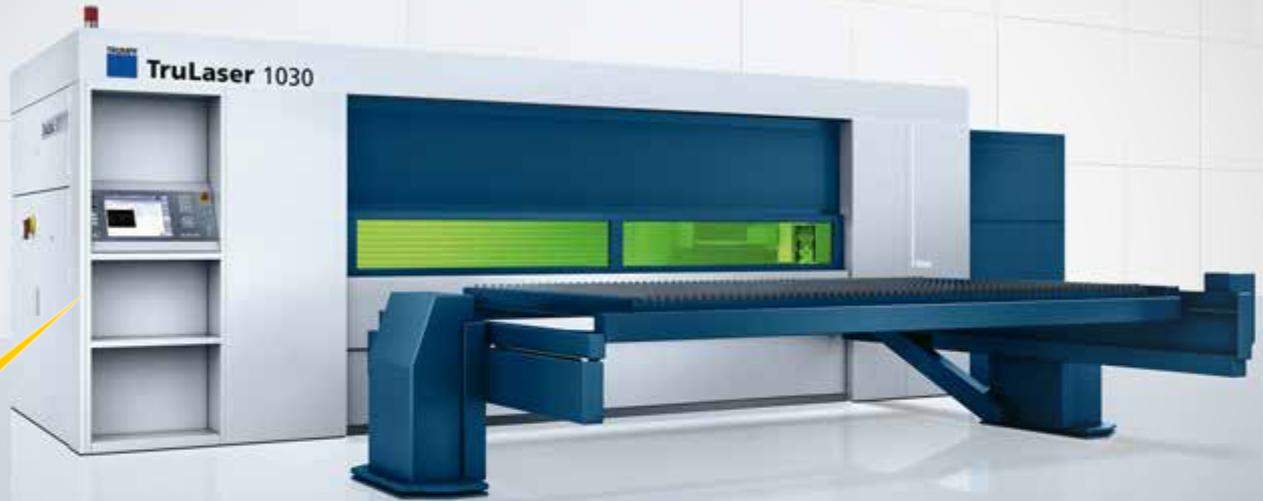
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BionicFinWave: An underwater robot with a unique fin drive



Navigating autonomously through a system of water-filled tubes

Nature impressively teaches us what the ideal propulsion systems for certain types of movement in water look like. For the latest concept from the Festo Bionic Learning Network, the bionics team was inspired by the undulating fin movements executed by marine animals such as the polyclad or the cuttlefish and created the BionicFinWave. With this form of propulsion, the underwater robot manoeuvres itself autonomously through a system of acrylic glass tubing. This project is providing impulses for future work with autonomous robots in the process industry.

With this technology carrier, Festo is once more creating impulses for future work with autonomous robots and new drive technologies for use in fluid media. Concepts like the BionicFinWave could possibly be further developed for tasks such as inspection, measurements or data acquisition – e.g. for water and wastewater technology or other areas of the process industry. The knowledge gained in this project could also be used for methods in the manufacturing of soft robotics components.

Swimming like the natural model

The longitudinal fins of the polyclad and the cuttlefish extend from the head to the tail – along their backs, their undersides or the two sides of their torsos.

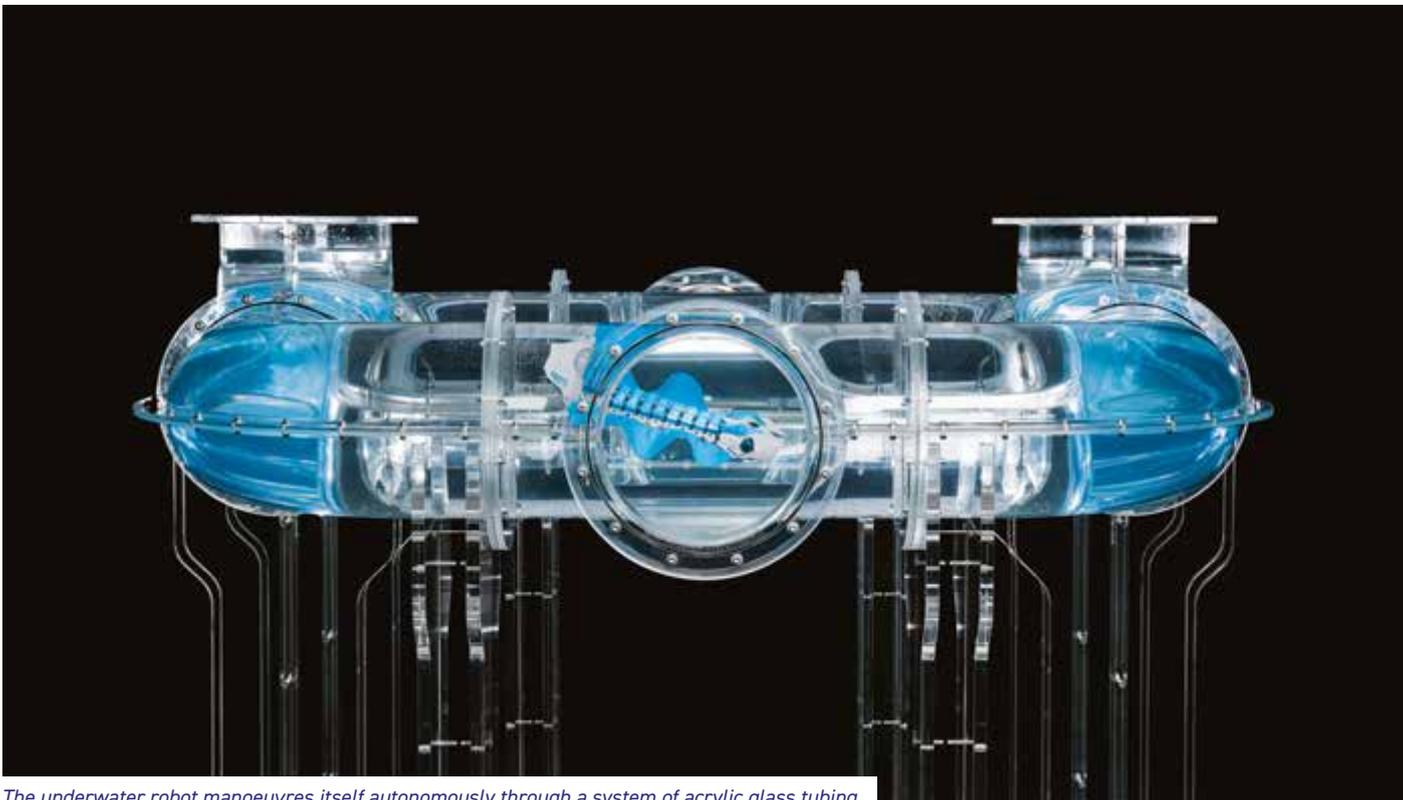
To move through the water, the animals use their fins to generate a continuous wave that progresses along the entire length of their bodies. This so-called undulation forces the water backwards, thereby producing a forward thrust. The BionicFinWave also uses this principle to manoeuvre itself forwards or backwards.

This has enabled Festo to technically realise a fin drive unit that is particularly suitable for slow, precise motion and causes less turbulence in the water than a conventional screw propulsion drive, for example. While it moves through the tube system, the autonomous underwater robot can communicate with the outside world via radio and transmit data, such as temperature and pressure sensor readings, to a tablet.

Flexible silicone fins as integral components

The two lateral fins of the 370-mm long BionicFinWave are moulded entirely from silicone and dispense with reinforcement struts and other supporting elements. They are therefore extremely flexible and can realistically emulate the gently flowing movements of their biological model.

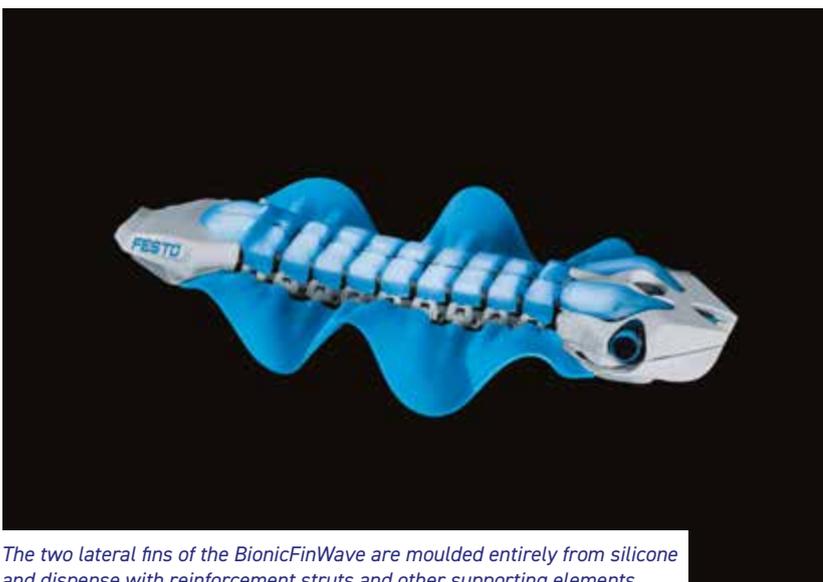
To carry out the movement, each of the two fins is attached to nine small lever arms with a deflection angle of 45 degrees; these are driven by two servo motors housed within the body of the underwater robot. Two flat crankshafts transmit the forces to the arms, so that the two fins can move independently of each other; by this means, they can simultaneously generate different wave patterns. To swim in a curve, for example, the outer fin moves faster than the inner one – as with the treads of an excavator.



The underwater robot manoeuvres itself autonomously through a system of acrylic glass tubing.



Sensors constantly register the BionicFinWave's distance to the walls and its depth in the water, thereby preventing collisions with the tube system.



The two lateral fins of the BionicFinWave are moulded entirely from silicone and dispense with reinforcement struts and other supporting elements.

The BionicFinWave moves upwards or downwards by bending its body in the desired direction. To make the crankshafts suitably flexible, universal joints are located between the lever segments. The crankshafts, together with the joints and piston rod, are made from plastic as integral components in a 3D printing process.

An optimally designed body with integrated onboard electronics

The remaining body elements of the BionicFinWave, which weighs only 430g, are also 3D-printed; this enables the complex geometry to be realised. With their cavities, the body elements function as floats. At the same time, the waterproof cavities offer a safe location for the entire control and regulation technology within a very small space.

A pressure sensor and ultrasound sensors constantly register the BionicFinWave's distance to the walls and its depth in the water, thereby preventing collisions with the tube system. This autonomous and safe navigation required the development of compact, efficient and waterproof or water-resistant components that can be coordinated and regulated by means of appropriate software.



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Critical Applications - Oxygen service



Supagraf® OX from James Walker is BAM certified for safe use with liquid and gaseous oxygen

Oxygen – essential for life yet so dangerous, poses huge potential risk when utilised in industrial processes

Minimising the risks

To ensure the safety of plant and personnel, extreme caution is required to ensure that all systems used for handling oxygen are correctly specified, designed, manufactured and maintained because the smallest error at any stage can prove catastrophic.

Although oxygen itself does not burn, it supports combustion. The more oxygen present in a system the greater the risk of fire occurring and the lower the temperature at which ignition will occur until, in its purest form, it can cause the rapid or spontaneous combustion of most materials – even metals.

Oxygen bonds with all elements in the process known as oxidation. If this process occurs rapidly fire can result. It is therefore essential that materials which will oxidise rapidly are not present in oxygen processing systems. Contaminants such as oils and greases – these could be anything from lubricants to simple residue contamination from handling components with bare hands are very capable of reacting with oxygen to cause fire and potentially an explosion.

In addition to ensuring cleanliness when working on oxygen handling systems all components, including sealing products such as compression packings, must also conform to the same levels of cleanliness – containing no potentially reactive lubricants or materials.

Developed and tested for safety

Supagraf OX, a new product launched by James Walker, is specifically designed to provide safe operation in duties involving liquid and gaseous oxygen. It has been ignition sensitivity tested to limits 420bar at 300°C and 440bar at 60°C and certified by BAM as suitable for use in sealing applications with both liquid and gaseous oxygen.

In addition, the graphite material from which Supagraf OX is manufactured conforms to Shell MESC SPE 85/204 (Sept 2012).

The product is also listed in the Shell MESC 77/303 (2018) specification by name and is therefore exempt from the Solvent Extraction Production Test and Oxidation Production Test – saving valve manufacturers from the cost and time necessary to carry out such testing.

From yarn to finished product, manufacturing takes place under clean-room conditions before being dispatched to the customer in double sealed packaging to ensure it reaches the point of use in a clean condition.

Assuming that the product is then correctly handled and installed – (see US standard CGA G-4.1-2009 'Cleaning equipment for oxygen service' 6th edition) Supagraf OX will provide safe, low emission stem sealing of valves in service with liquid or gaseous oxygen.

James Walker

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Severn advances as uncertainty abates



Valve companies with interests in the oil and gas sector have had a rocky ride since the 2014 oil price crash. But with stability returning and operators feeling cautiously optimistic, Severn Glocon Group is making strong progress

Good times for established plant

Over the past four years, many operators sought to boost the efficiency of existing upstream facilities as they scaled back on new projects. Severn's advanced valve engineering services are a critical enabler in this scenario. Optimising valve population performance and applying bespoke, intelligence-led solutions to individual problem valves can drive significant improvements in reliability and productivity.

Severn invested heavily in its established plant capabilities from 2009-2014, opening purpose-built facilities in Brighthouse, extending its global footprint and building on its world-class engineering team. This enabled the business to respond quickly to the shifting priorities of operators post-2014, maximising opportunities and driving exponential growth.

North Sea focus

The Aberdeen market continues to play a major role in Severn's business. Alongside the uptake in offshore control and choke valve management and upgrade programmes, its isolation valve supply business Severn Ball Valves has also performed well in securing and the ongoing management of 5 operators assets for isolation valves and actuation. The large stockholding, testing and machining capabilities within Aberdeen has seen Severn be able to support operators on short lead time deliveries in critical shutdown periods. In fact, 2017 was this division's best ever year, something divisional MD Brian Wood attributes to industry knowledge and high levels of customer service. Severn Ball Valves have also successfully transitioned to the ISO 9001 & 14001:2015 standards as well as achieving accreditation under OHSAS 18001 and continued improvement under FPAL 'Verification' within the last twelve months.

From 1 September 2018, Severn Ball Valves will begin trading as Severn Glocon Aberdeen, to better reflect the scope and scale of the engineering services it offers across mechanical valves as well as isolation valves.

Central Asia, Middle East and Africa

Just ahead of the oil price crash, Severn launched its Severn Valve Solutions (SVS) business model. It's rooted in progressive nurturing of local valve engineering skills in production markets that have suffered from lack of investment. And it involves a strategic blend of Severn's advanced valve engineering expertise with infrastructure support from national partner organisations.

SVS' ventures in Iraq continue to excel, meeting targets for developing the skills of local engineers while driving performance improvements for organisations including Basra Gas Company. Kazakhstan operation BorkitSG recently acquired two major long-term maintenance, repair and operations contracts. Furthermore, a new SVS business, GenesisSG, has been launched in Ghana to boost plant performance and upskill local workers as the country seeks to ramp-up production in a bid for energy independence.

Global Engineering Forum

As Severn's international operations continue to develop, fostering ongoing collaboration across global engineering centres is paramount. A recent forum saw engineers from Gloucester, Brighthouse and Chennai meeting in India for four days of teambuilding, planning and information sharing. As signs of recovery become apparent in the new projects space, this event has left the global engineering team re-energised, focused and ready for action.

Colin Findlay, Executive Director, says a combination of applied valve engineering expertise and historic OEM valve repair intelligence data enables Severn to add tangible value. "Our specialism is overcoming those extreme critical and severe service applications that represent a major headache to operators," he explains. "Developing innovative valve technologies for challenging scenarios is what we do best. And that goes down well with all our customers across new projects and established plant alike."

Join us in Aberdeen

To celebrate the relaunch of Severn Ball Valves as Severn Glocon Aberdeen, we're hosting a two-day series of technical workshops in Aberdeen, from the 3rd - 4th October 2018 at the Hilton Treetops Hotel, for more information please visit our website.



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Emerson discrete valve controllers improve plant reliability



Emerson's TopWorx™ D-Series uses HART® 7 communication protocol to provide advanced diagnostics and monitoring capability that lowers total cost of ownership and prevents unplanned shutdowns

There are certain key challenges that industrial companies must meet if they are to make the kind of operational improvements that will enable them to outperform their peers. These challenges include improving the overall reliability of the plant, avoiding unplanned shutdowns and reducing the total cost of instrumentation ownership, all of which contribute to improving profitability. The business goals of every organisation depend on the performance and reliability of its critical production assets, including on/off valves, and correctly-performing devices can play a pivotal role in meeting these challenges.

For many years valve controllers using digital communications technology such as the HART® protocol have been helping to ensure devices are operating reliably and are available to perform actions when required. HART provides data access between intelligent field instruments and host systems through two simultaneous communication channels – one analogue and one digital. The analogue signal communicates the primary measured value (PV), while the digital signal contains information from the device, including PV, device status, diagnostics and additional measured or calculated values.

With the availability of the HART 7 protocol, the functionality of valve controllers has been expanded, providing many new capabilities, including:

- Enhanced burst mode, adding variable status to the burst message.
- Expanded manufacturer ID, allowing new manufacturers to register devices.
- Increased device output capability from four to eight variables, enabling users to access more information about their devices.
- Time stamp, allowing users to configure the time between measurements.
- Device trend tracking, by recording data points.

A number of these new capabilities have been adopted into Emerson's TopWorx™ D-Series discrete valve controllers. D-Series devices enable automated on/off valves to communicate via a broad range of fieldbus protocols and HART. They attach to all rotary and linear valves and actuators, operate in the most demanding environmental conditions, and have multiple certification for hazardous area deployment. Products in the D-Series range can be used in applications including SIL 3 Emergency Shut Down (ESD), global containment, and explosive or corrosive environments.

Engineered to meet tough applications while offering high reliability and installation flexibility, Emerson's rugged and affordable discrete valve controllers are designed to provide dependability in all environments.

With the addition of a HART 7 position transmitter option, D-series devices now provide additional functionality, including advanced diagnostic and monitoring capabilities that are essential for improved operational efficiency and maintenance planning.

Excessive irrelevant alarms can have a negative impact by causing spurious trips that affect maintenance schedules and lead to lost production. Most valve controllers provide only standard programmed alarm settings, which end users cannot shut off, even if they are irrelevant to their particular application or facility. The TopWorx D-Series with HART can now provide intelligent alarms and counters, which can be tailored to suit the requirements of their specific application. Eliminating irrelevant alarms prevents spurious trips and lost production, thereby not only improving operator workload, but also contributing to lower total cost of ownership.



A further advantage of the TopWorx D-Series with HART is that it can be applied within hazardous areas, such as Ex db, without the need for an intrinsic safety barrier. This reduces hardware costs, further lowering total cost of ownership.

Unscheduled downtime that reduces plant availability and increases maintenance costs is something plant operators continue to strive to avoid.

Helping to prevent unplanned events, TopWorx D-series with HART devices feature internal device temperature monitoring. This enables users to take immediate remedial action if the device temperature reaches a designated high point. Such early diagnosis minimises the potential for the device suffering damage that could lead to unscheduled downtime for repairs, and thereby helps to increase availability and overall equipment effectiveness.

Increasing the speed of process and diagnostic data throughput is beneficial because it helps identify potential problems earlier.

The TopWorx D-Series with HART supports this using 'burst mode notifications'. Burst mode provides high-speed bulk data transmission and enables devices to proactively send messages instead of waiting for a host request. The additional functionality provided by HART 7 enables the TopWorx D-Series to enhance its burst mode capabilities by adding variable status to messages, showing the quality of that data.

Valve reliability is crucial in helping to maintain plant availability and profitability. To help improve reliability, the HART 7 position transmitter option enables TopWorx D-series devices to provide five-point calibration at 0%, 25%, 50%, 75% and

100% for more accurate set-up on linear applications.

When the TopWorx D-series with HART is used in tandem with a positioner, the positioner receives an AO signal for desired valve position, and the TopWorx HART 7 indicator sends back an AI signal to validate the AO.

Since control valves and on/off valves have very different valve signatures, the five-point calibration option enables the TopWorx indicator to match the positioner feedback signature and provides increased assurance that the valve is working correctly, without having to take it out of service. This also supports more accurate and reliable process control.

To further enhance process reliability, the TopWorx D-Series features limit switch position monitoring that provides confirmation of the information received from a properly functioning monitor. This functionality ensures your critical on/off valve is in the correct position.

For more information, visit:
www.emerson.com/topworx.



Tel: 0161 406 5155
Email: uksales@emerson.com
Web: www.emerson.com/topworx

Pressure Tech - Off to a Strong Start

At Pressure Tech, we have never been afraid to make big investments in our facilities, resources & equipment and the past few months have been no different as we look to push on from a strong start to our FY2017/18

After putting together plans to deliver our projected double-digit year-on-year growth, we identified our primary focus which was to secure additional resource for key areas across the business that would support our position as a market leader in the supply of high quality pressure regulators, and would concurrently push the Pressure Tech brand to the next level.

Since the turn of the year, we have made a strong start on the delivery of these plans with the introduction of a new dedicated MRP Planner, Andy Tomlinson, to support our planning and production department.

In addition, we have welcomed experienced duo Darrell Massey and Anthony Southworth, who have filled the positions of Quality Manager and Technical Sales Engineer respectively. We have already started to see the positive impact of their arrival with the introduction of new internal processes and procedures, along with extra focus on customer service.

We are also pleased to announce the newest addition to the Pressure Tech team, Gordon Clifford, who joins us in the new role of Technical Sales Manager for the UK and Europe. Gordon has brought with him a wealth of experience from a leading global valve and automation distribution company within the upstream/downstream oil and gas,

petrochemical and other energy sectors. It is an exciting announcement to make as we look to continue to offer technical know-how, focus and support directly to our customers.

The Pressure Tech brand is synonymous with high quality products at competitive prices and with our knowledge and experience we have supported numerous customers through the design of unique solutions tailored to address individual applications.

It is this message that Gordon will continue to promote - in fact, he has wasted no time in getting out to meet our customers on-site and face-to-face to understand how Pressure Tech's products and technical expertise can be utilised to even greater effect through our commitment to customer service.



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ValvTechnologies, Inc. Names Ron Anselmo, Vice Presidents, Key Accounts

ValvTechnologies, Inc., manufacturer of zero-leakage severe service isolation valve solutions, today announced the appointment of Ron Anselmo as Vice President, Key Accounts

Based in the Houston, Anselmo will have senior management responsibility for sales growth through the development and management of executive, technical and commercial relationships for key accounts with major customers, licensors and engineering firms. With more than 30 years' in the refining, gasification and power businesses, he brings extensive global energy and business expertise and sales experience to the Company.

Anselmo started his career with Amoco Oil and held leadership roles in engineering, operations (fractionation, coking, residue hydro processing, reformulation), maintenance, project management and construction. He was a GE global commercial sales leader for strategic development and licensing of large complex integrated combined cycle gasification facilities.

Most recently he was with Calpine Corporation where he was responsible for power plant project development, design, thermal modeling, combustion turbine and

heat recovery steam system equipment purchases and engineering procurement and construction commercial partnering.

"Ron's expansive diverse industry experience, together with his strong leadership skills and customer-focus, makes him an excellent fit with the goals of our organization," ValvTechnologies' President, Kevin Hunt, commented. *"We welcome him to our management team and look forward to his leadership in this critically important growth role for our business."*

"Ron's expansive diverse industry experience, together with his strong leadership skills and customer-focus, makes him an excellent fit with the goals of our organization"



Ron studied at Texas A&M University and has a Bachelor of Science in Maritime Systems Engineering and is a registered professional engineer. He also received a Master of Business Administration from University of Houston.



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Understanding Causes for RV Chatter

High inlet pressure drop is one of several causes of pressure relief valve chatter. Left unresolved, chattering can cause premature component wear and eventually valve failure. Farris' restricted lift PRV design is a cost effective solution for resolving chatter due to excessive inlet pressure loss



Up to 25%* of pressure relief valves (PRVs) in refineries and chemical processing facilities experience high pressure drop at the inlet of the valve. High inlet pressure losses occur when frictional losses due to piping are excessive or undersized fittings have been utilized. These piping dynamics starve the pressure relief valve of capacity and cause the RV to rapidly open and close, a condition called chatter.

Chatter can lead to premature wear to the internal RV components or even cause valve failure. Calculating

the inlet piping hydraulics will determine if the cause of the chatter is indeed due to excessive inlet pressure drop. API and ASME Appendix M recommend inlet pressure loss to not exceed 3% of the RV's set pressure. For most processors, the possibility of receiving OSHA fines for excessive inlet pressure loss is a major driver for corrective action.

Farris has introduced a cost effective solution to correcting RV installations experiencing inlet pressure loss with the Restricted Lift 2600 Series design. Restricting the lift of the RV reduces the effective orifice (relieving) area and therefore minimizes the overall valve capacity (actual capacity vs effective capacity) from the RV. The reduced flow means the valve will experience lower frictional losses in the piping, mitigating inlet pressure drop.

Farris Engineering Services provides processors with deep expertise related to relief system performance and technical solutions for pressure relief valve hardware.

Contact our FES team to properly identify the source of RV chatter in your relief valves. To learn more about the 2600 Series Restricted Lift design, please contact your local Farris representative here.

**Statistic is based on calculations performed by Farris Engineering Services on ~32,000 PRVs over the past twelve years.*

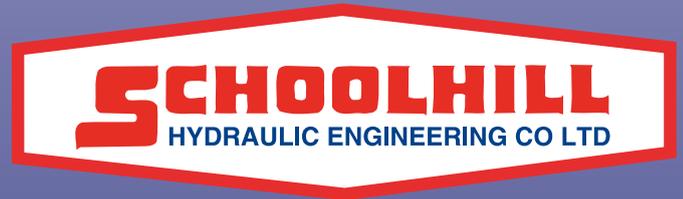


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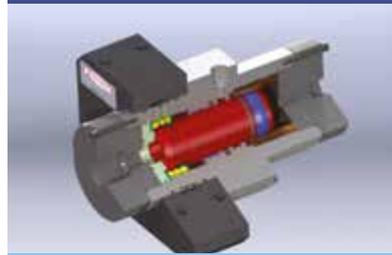
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A RANGE OF PRODUCTS PROVIDING

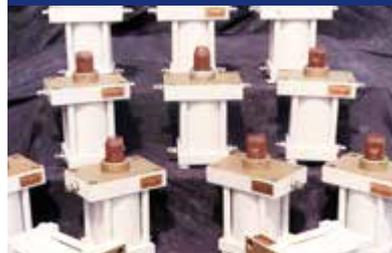
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HH Valves Supply Bespoke Solution to South African Power



In today's fast paced life, more and more emphasis is placed on delivery times and the demand for the availability of a wide range of products from stock is consistently increasing

Our high pressure small bore parallel slide valves are highly versatile and are easily modified to suit a customer's requirements. Having a range of valves that are adaptable matches HH valves readiness to provide each customer a bespoke solution to each request.

We are currently supplying the second batch of high pressure parallel slide gate valves with 2500# RTJ flanges (pictured) with a customer specific face to face requirement fabricated & finished by HH valves, which we have been able to turn around in a few short weeks.

Ideally suited for isolation duty on steam lines, the high pressure parallel slide gate valve design offers many advantages against the traditional gate and globe valves that we replace on a regular basis across a growing number of sites globally.

Operating on position limit rather than torque to close, the parallel slide valve design allows the end user to be confident of maximum line isolation as the valve utilises the line pressure to achieve a positive seal.

'the high pressure parallel slide gate valve design offers many advantages against the traditional gate and globe valves...'

Available from stock, ½" to 4" in pressure classes 1690#, 2850# and 4500# and varying materials such as A105, F22 & F91. We are able to cater to most requests off the shelf further reducing the lead times we can offer and with bespoke customer requirements adapted in-house by HH.



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J+J & Electric Plastic Valves – Perfect Partners



Regarded by many as one of the leaders in electric actuator innovation over the last 20 years, the EU designed and manufactured J+J electric actuator can justifiably claim its current production model, the J3C-S Type, as probably the world's most flexible electric actuator

With unrivalled and patent pending 24V-240V AC or DC multi-voltage range with automatic voltage sensing, multi-colour LED light for continuous visual actuator status feedback to the user, and its ability to change its operational function with user-friendly plug and play conversion kits to create failsafe and/ or modulating actuators from stock, it's hard to think of a rival. All this in a plastic, industrial weatherproof housing.

Conventional aluminium electric actuators tend to be significantly heavier than the light weight J+J, and it is not uncommon to see the extra cost added to installations where an extra support is required under each motorised plastic valve to support stop the pipework flexing.

These heavy aluminium actuators can also restrict the design of pipe runs as the valves often need to remain horizontal otherwise the weight of the actuator can shear the fixing points to the valve unless more, costly supports are added simply to carry the weight of the actuator.

No extra supports are usually required when pairing plastic valves with the lightweight, plastic housed J+J actuator.

Mounting valve actuators to plastic valves can be difficult, but as covered in Issue 43 of the Valve User magazine, J+J have developed and produce a variety of mounting kits to overcome these problems, including the highly popular EasyFit kits to enable the J+J actuator to be mounted to the FIP VKD and TKD, GF546 or the Asahi Type 21 ball valves.

Gaining in popularity is the Hidroten 3 way PVC ball valve, also designed and manufactured in the EU making the whole assembly of EU origin, because it is the only 3 way valve with side outlet readily available up to 3"/D90.

Available from 1" with both L port balls for diverting applications and T port balls for mixing/ diverting, these three way ball valves have an integrally moulded ISO5211 actuator mounting platform allowing either the J+J electric (or its pneumatic counterpart the CH-air) to direct mount.

So, if you are looking for actuated 2 way or 3 way plastic valves, consider the J+J electric actuator, the perfect partner for plastic ball valves.



Tel: 01629 55577

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Web: www.jjautomation.com

Bonomi's Colour Coded Solutions Helps Eliminate Connection Errors



Hydraulic couplings from Bonomi (UK) Ltd can now be fitted with Colour Safe connectors designed to enable easy identification and prevent potentially dangerous errors in hydraulic hose connection.



This simple, yet highly effective identification system has been developed to eliminate the risk of incorrect connections, which could result in malfunctions that might cause injury to machine operators and costly damage to equipment.

The system also allows uniform labelling of coupling types, enabling operatives to carry out quicker and more accurate maintenance.

'Uniform labelling of coupling types, enabling operatives to carry out quicker and more accurate maintenance.'

Available in a wide range of colours for DNP standard (PLT1) and premier (PLT4 & PLTX) flat face couplings (ISO 16028) in sizes 1/2" to 1 1/4", the easy to fit connectors can be applied to both new and in situ units.

The Colour Safe connectors are supplied with a simple manual tool to fit them to the female coupling band, the ring of the male being easily fitted by hand.



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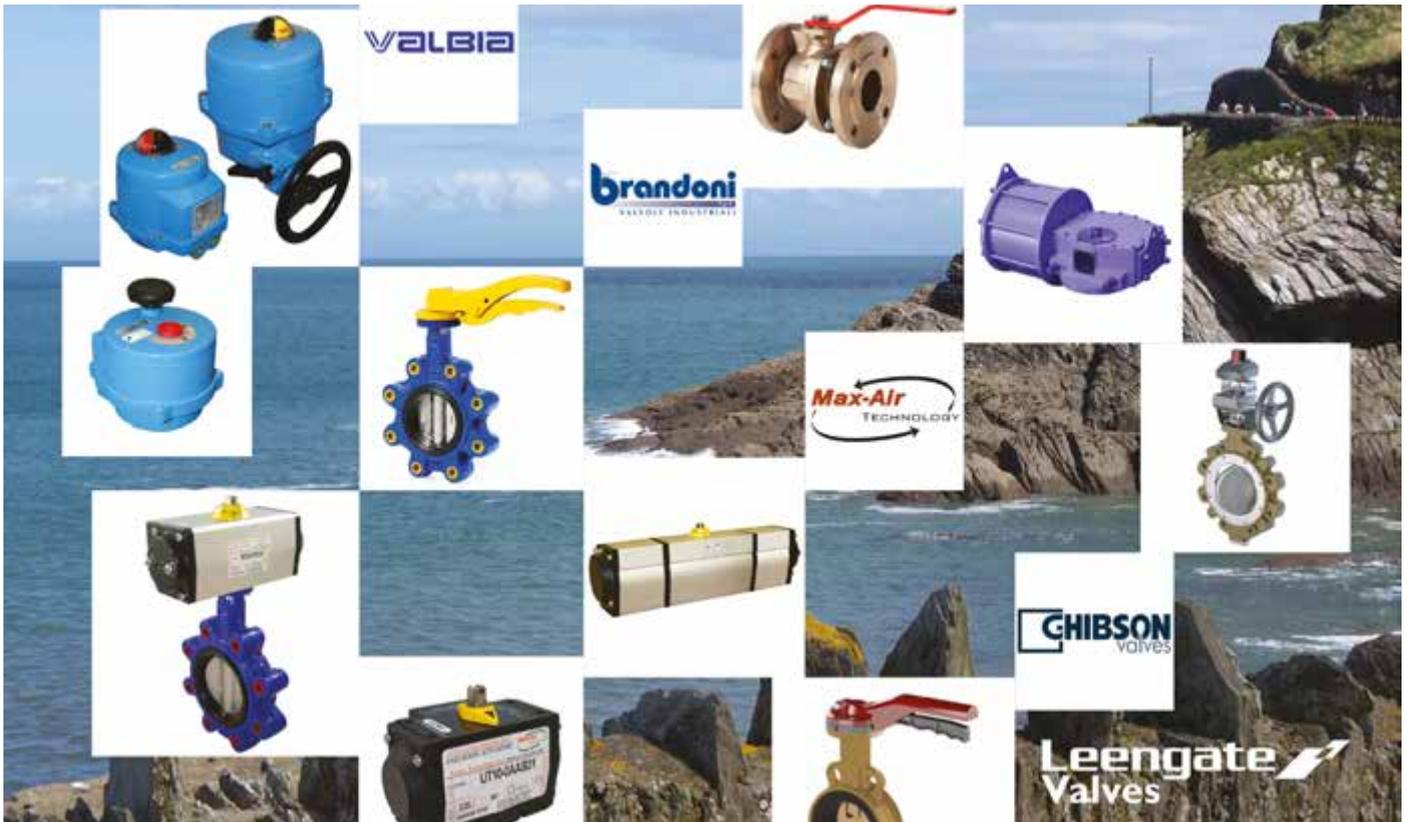


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Leengate Valves Committed to Offshore & Marine Markets with New Products



Leengate Valves show commitment to offshore and marine markets with new products and highly reliable supply chain

Leengate Valves' capabilities to supply the offshore and marine market have seen a keen rise over the past few years. As a result of exclusivity to distribute selected brands, their most recent product catalogue showed the addition of aluminium bronze body butterfly valves for wholesale distribution to the UK and it's clear the objective of the Leengate team to increase their supply and service to this area is gathering pace.

The aluminium bronze additions are manufactured by Ghibson; a solid, reliable brand within the offshore/marine valve industry. These new additions to the Leengate range are wafer pattern to suit PN10, PN16 or ANSI 150 flanging and offer a fully aluminium bronze construction and NBR liner; excellent for the processing of seawater in salt air environments.

As well as offering suitable aluminium butterfly valves, Leengate also have a good supply of bronze and aluminium bronze ball valves, flanged to PN16 and ANSI 150, and actuation solutions that can satisfy a variety of demanding offshore environments with great efficiency.

Managing Director, Steve Pickering said, "Our status as exclusive UK distributors for Max-air, Ghibson, Brandoni and Valbia has been instrumental in the increase of service in the offshore and marine areas. We can offer customers a reliable chain of supply, decades of experience and a great quality product."

In addition to their standard valves, Leengate Valves' well equipped actuation centre can offer automated solutions for many different processes. With a range of supply from Max-Air and Valbia, including an exhaustive selection of materials and coatings, Leengate Valves' team are always keen to supply an efficient solution for its customers. Material and coating options include, among others, glass reinforced polypropylene pneumatic actuators, technopolymer electric actuators, electroless nickel infused aluminium and polyamide epoxy coatings - which are known to be a particularly good at resisting corrosion from salt air.

"A strong relationship with manufacturing partners in Europe has proven vital to our intensified efforts in the marine and offshore market. Customers are benefiting from decades of networking and an environment that offers good availability of products, quick delivery times and an all-around reliable supply flow," said Arran Macalister, Engineering and Actuation Manager at Leengate Valves.

You can speak to a member of Leengate Valves' team by calling (0044) 1773 521 555 or emailing info@leengatevalves.co.uk.



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Web: www.leengatevalves.co.uk

How to revolutionise your work place in 5 simple steps



With the new approach being adopted across the business LB Bentley are looking forward to a brighter future by introducing the 5S ethos that will enhance our current working practices

When looking at ways to improve working practices 5S relates to workplace organisation and forms a solid foundation upon which many organisations base their drive for Continuous Improvement.

When fully adopted 5S is a systematic and methodical approach allowing teams take ownership to organise their workplace in the safest and most efficient manner. It is an approach that focuses on establishing visual order, cleanliness, standardisation and organisation. The 5S principles are:

- **Sort** – clean-up and organise
- **Set-in-order** – arrange everything in the work area
- **Shine** – regular cleaning and maintenance
- **Standardise** – make the work place easy to maintain, simplify and standardise
- **Sustain** – maintain what has been accomplished

The initial stage in the roll-out of 5S is encouraging each team to remove all unnecessary items from their workplace. What is left is then placed in a permanent location which is prioritised and optimised for – how, where and at what frequency the item will be used.

A policy of inspecting and repairing equipment as part of a cleaning regime is then adopted with the entire process being managed by continuous assessment by the teams carrying out audits on themselves and suggesting improvements through self-assessment. A significant part of the 'workplace organisation' process involves the use of visual management where everything that takes place within the workplace should be easily understood by everyone, including strangers to the process. As part of this visual management fundamentals such as clear signage, PPE requirements, clearly

marked areas, etc. should be adopted, this along with the 5S principles will ensure that the added benefit of increased safety is applied, known as 5S+Safety or 6S.

Adopting the 5S approach is not just a solid foundation on which to build Continuous Improvement, but it delivers a number of very tangible benefits such as:

- Delivering improved Safety
- Improving Performance – Productivity, quality and profitability
- Delivers a reduction in waste – getting things right first-time approach
- It gives employees a sense of ownership and a desire to improve their work place

By adopting this positive approach LB Bentley are confident that we can build on our strengths and step forward in to the future by continually improving on the delivery of the best quality of products and service to our customers.



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Web: www.severnglocon.com

Another New Valve Product “Lined” up in Stock!!



G.C.Supplies UK is pleased to announce the launch of the new KV PFA Lined Ball Valve range in to the UK market

Availability, Affordability, Innovation and Performance have always been the key criteria in G.C.Supplies product range, so when the opportunity presented itself to add further value to their already comprehensive portfolio, it was grabbed with both hands.

The welcome addition of the CF8M 316 Stainless Steel bodied PFA Lined Ball Valves arrived into stock recently and are available in sizes 1" - 4" with both ANSI 150# and DIN PN16 Flanged Ends. The valves are Full Bore with full PFA Lined Body, Ball and Stem with PTFE Seats and Seals and have ISO 5211 Mounting Pads and a Locking Facility as standard.

relationship has continued to grow stronger and stronger and our stock levels have continued to grow larger and larger. The quality of the KI product range leaves absolutely nothing to be desired and carries a multitude of quality and testing approvals that include SIL2, ATEX, ISO 15848, DNV and Lloyds Shipping to name but a few."

"After several years of product development by Kingdom (KI) we are confident that the new PFA Lined valves enable us to offer a quality, off the shelf product that does not break the bank and will provide years of trouble free service on severe service applications."

For more information on the new PFA Lined Ball Valve range, or indeed, any other of our KI products, please contact our Sales Office on 0161 681 1842 or visit www.gcstainless.co.uk

'...been working with the manufacturer, Kingdom Flow Control Limited, for over 20 years...'

GC SUPPLIES UK LTD

Commenting on the product, GCS's Sales Director, Andrew Steeles, said "We are delighted to have added this new valve range to our stock inventory. We have been working with the manufacturer, Kingdom Flow Control Limited, for over 20 years now, starting off with their Stainless Steel Pipe Fittings range in the mid 1990's and progressing onto their valve range shortly after the millenium, our

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NEW MEMBER

Flow Control Precision Assured With Bonomi's V-Notch Ball Valves

Bonomi (UK) Ltd has introduced a V-Notch option called 'Vball' to the best-selling ball valves in its range, enabling users to achieve even greater stability & accuracy in terms of flow control



The Vball range has undergone rigorous testing at Bonomi's Rubinetterie Bresciane laboratory and other third party test facilities. Endurance testing has been conducted beyond CV/KW, noise and valve parameter measurement (FL, Xt..). Valves are offered with graphite filled PTFE seats.

A wide variety of valves are available with a Vball including Inox-val, Radiamont, Wafer, Split-body and Wafer-split. Virtually any customer requirement can be catered for using V30-60, V60 and V90 patterns with additional special patterns available on request.

Available from ½" in all new sizes, the Vball can be used with liquids and gases, enabling an accurate and precise flow control with a range up to 500:1.

Each valve's design has been validated using FEA Software (finite element analysis) CFD Software (computational fluid dynamics) and Flow Loop testing. CV and KV curves are also available.

Using specialist VALPSIZE configuration software, valves can be sized (ISA 75.02, IEC 60534-2-1) checking fluid velocity, valve openings, noise and other critical issues. Valpres control valves are available with a manual calibrated lever with opening and flow direction indication and can be configured with Valbia pneumatic or electric actuators to fit individual users' flow control needs.



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Actuated Solutions adds new APL 9 Switchbox to Growing Product Portfolio

Actuated Solutions Ltd (ASL), one of the UK's leading providers of valve automation products, has introduced a new switchbox to its very popular APL range



The new APL 9 features all the benefits of its best-selling APL 2 - including IP67 enclosure, beacon indicator, stainless steel shaft and mounting bracket but, uniquely for a product at this price point, the APL9 comes with a stainless steel housing as standard.

This makes it the ideal choice for use in aggressive environments where aluminium is unsuitable.

The APL910 switchbox is supplied as standard with 2 x V3 limit switches and 304 housing but options include 4 off switches, proximity sensors and 316 housing. ASL can also supply stainless steel switchboxes to suit explosion proof and intrinsically safe areas.

The APL series, which is by far the leading switchbox brand in the UK and across Europe, is available exclusively from ASL who offer the widest range of switchboxes and control products on the market. The APL9 is the latest addition to their range and, with more specifications under development, other products will be available in the near future.

In recent years the APL switchbox has become synonymous with exceptional performance, quality and reliability and this latest version is no exception.

Paul Slaughter, Managing Director, Actuated Solutions commented: *"As technology develops it is important that our product portfolio remains dynamic to meet the ever-growing and changing demands of the market. At ASL we endeavour to exceed customer expectations and are quick to recommend new technologies - whatever the application and demands of the system in question."*

The APL 9 is a robust stainless steel unit and offers an exceptional price point - with the switchbox available at very similar prices to the aluminium unit - and it continues the high level of performance our customers have come to expect from the APL range."

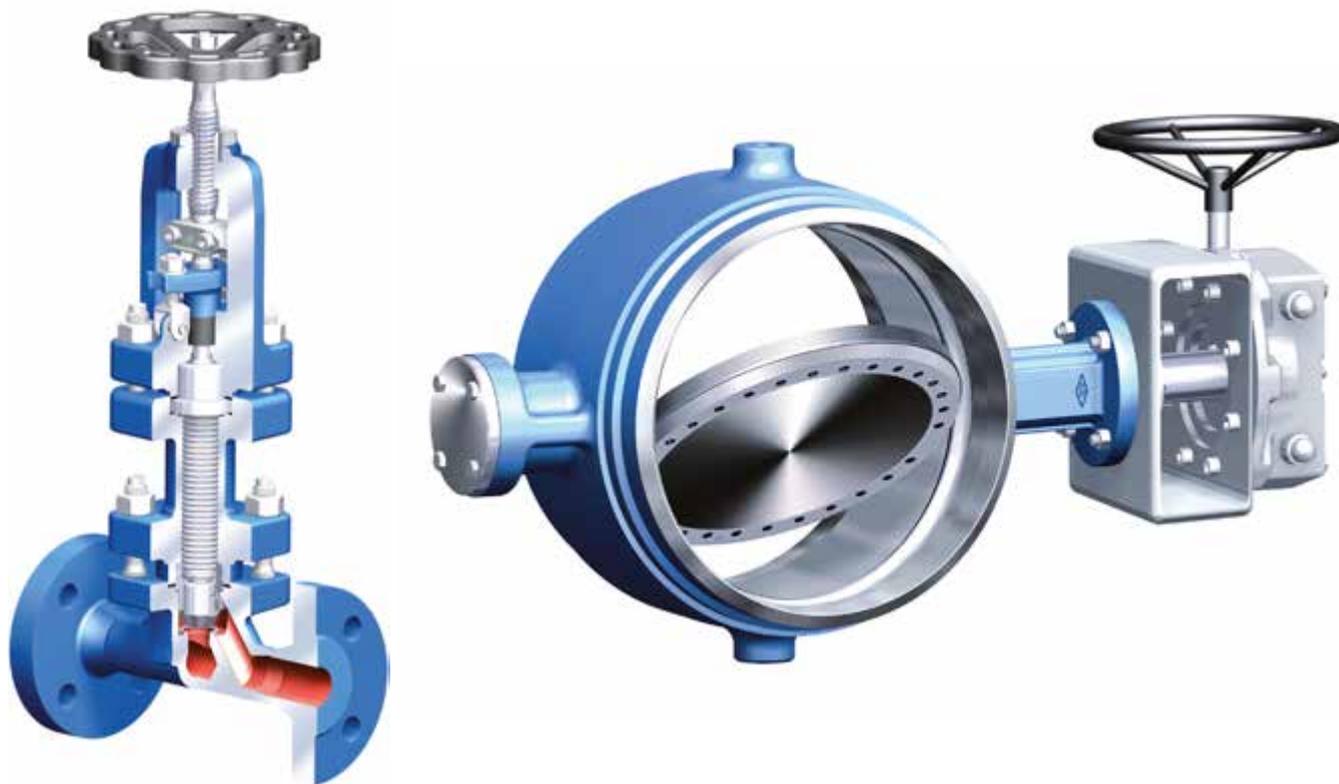
When you buy a genuine APL switchbox through Actuated Solutions, you are not just buying the switchbox, you are investing in over 30 years of experience in valve automation, as well as expert advice and dedicated aftersales support.

To find out more about Actuated Solutions and the APL Switchbox range, please use contact details below.

ASL Actuated Solutions Limited
VALVE AUTOMATION SPECIALISTS

Tel: 01243 827 469
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New features launched by ARI-Armaturen including bellows sealed globe valve for medium pressure!



ARI-Armaturen once again made a strong appearance at the world's leading show for the process industries, AICHEM, this year which took place 11-15 June in Frankfurt

Exhibiting a comprehensive range of innovative, high-performance valves, ARI took this opportunity to launch some new product features. All of which received an extremely positive reception.

ARI's versatile bellows sealed globe valve range, FAB, has the new addition of the FAB Supra MD – now offering the process industry a stop valve with bellows seal suitable for medium pressure for PN 63 to PN 160. Reliably tight, even at high pressures, owing to the bellows seal, serrated seal and stellite marginal plug (ideal hardness gradient: Stellite 6 / Stellite 21).

Combining the benefits of a metallic sealing process valve with the advantages of a butterfly design, ZETRIX is the premium triple offset process valve range.

ZETRIX can be used for isolation and control even in harsh industrial environments offering optimal performance and reliability. This impressive range now has a version with butt weld ends available, as an alternative to the double flanged and fully lugged designs.

The butt weld end version is available in sizes DN 80 to DN 600 for PN 6 to PN 40. In addition, the fully lugged, wafer flanged version is now offered in DN 80 to 600 for PN 63/100 (class 600). All models have a stellite seat and are firesafe tested with bidirectional gas-tight shut-off and zero leakage according to EN 12266-1 and API 598.

Customers can now order any SAFE valve in stainless steel and up to size DN 250 including a stainless steel bellows. The bellows not only provides backpressure compensation; it also seals and protects the spring chamber and the guides.

The two-fold safety due to the separate balanced piston acts redundantly with the bellows and is supplied as a standard feature at no extra cost. Increased safety is possible on request in the form of two ARI combinations: SAFE Combi-C (change-over valves) and SAFE Combi-R (rupture discs).

Other new developments to ARI ranges include a power version of the CONA S ball float steam trap with higher performance for differential pressures up to 32 bar and >10,000 kg/h capacity, the CONLIFT mechanical condensate pump which is now offered with a cast steel body plus the STEVI Pro – high performance control valve with a stainless steel variant also with stainless steel bellows.

For more information on products and new features from ARI-Armaturen contact the UK sales office on 01684 275 752, email enquiries@uk.ari-armaturen.com or visit www.ari-armaturen.com



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Kent Introl's OEM Valve Diagnostics Service Benefits Major European Oil Refinery



Kent Introl recently completed a full control valve diagnostics and upgrade project for a leading European oil refinery

////////////////////////////////////

This poor performing valve had long term operational issues following overhauls by a third party service provider; within three months of the valve being returned to service, problems would occur and the unit would require further maintenance. The issue had been ongoing for years.

A full functional test of the valve was undertaken with our diagnostics equipment, the Profiler. The Profiler is used to detect and document a number of issues with valve and actuator performance such as actuator operational pressures, assembly frictional levels, seat angles, calibration issues and air leaks plus other information. The results of the diagnostics footprint would provide us with the data required to troubleshoot and solve ongoing problems.

First steps

We approached the client to discuss critical valves with inherent poor performance. Our aim was to solve these problems for the long term and demonstrate how we could add value above and beyond many of our competitors. We focused on a particular critical valve which had been exhibiting ongoing issues for several years. Its internals were only lasting for periods of around three months and required frequent maintenance by a third party service provider.

We suggested that we visit the site to carry out control valve diagnostics and create a detailed report that would inform our long term solution. The client agreed with our proposed plan and we went on to profile the valve while in situ and temporarily bypassed.

The valve had been seizing in position due to a build-up of Crystalline Salt between the plug and the guide. As such, an upgraded trim design was required which mitigated the areas in which the salts could form. The Profiler confirmed the additional load generated within the trim as a result of this buildup. The process medium is highly toxic so traditional intrusive maintenance methodology wasn't an option.

Diagnostics testing and findings

Three tests were performed: the profile test, the resolution test and the sensitivity test.

The first diagnostics testing was completed when the valve was in service and performing badly (testing would be also be undertaken at the following stages of 'as returned to shop', 'as overhauled' and 'as returned to service.'). The Profiler confirmed that the positioner calibration was out and there were high levels of stiction. These results validated that the valve required an overhaul and trim replacement.

The valve was then taken out of line and shipped to us for its upgrade. We completed another profile check to compare to the initial on-site report, then carried out the overhaul and upgrade. This was followed by our third diagnostics test, which confirmed that the valve was now fit for purpose and ready to be reinstalled. The valve was returned to service and underwent its final diagnostics check. After almost six months of service, it continues to perform perfectly with no unplanned outages.

A unique offering

The project presented a number of unique challenges. Our client was apprehensive about removing this critical valve from site and arranged for a team member to accompany it. Witnessing the work being undertaken was an extra confidence boost.



This project was somewhat of a risk and it was vital that we proved ourselves in order to build up a lasting relationship with the client. Fortunately the process ran smoothly and the results proved our skills and expertise as an OEM.

This is what sets Kent Introl apart from its competitors that use similar diagnostics equipment. As an engineering OEM with a full Applications department, we can offer solutions that others can't match. Our expertise and technical capabilities allow us to redesign the internals of a valve, whereas competitors may simply re-engineer. Furthermore, Kent Introl can provide every valve with the OEM full warranty of a new product, offering customers peace of mind and long term value.

Project highlights

Though we were well aware of our capabilities with full valve diagnostics, our client took a risk to appoint us to work on this critical valve. However, this risk paid off and the valve has now performed for twice as long as ever before with no issues to report.

Our client could see the value in our diagnostics work and has now commissioned us for further projects. This in turn has boosted our credibility within the site and opened many doors for us, including kickstarting a dialogue with another major refinery.

By working on isolated problematic valves and identifying where we can add value as an OEM, Kent Introl are able to offer an unrivalled service and build long term relationships with our clients.



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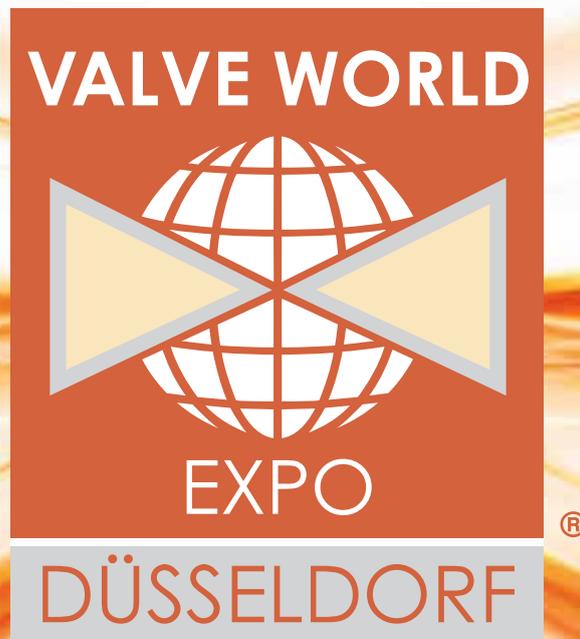
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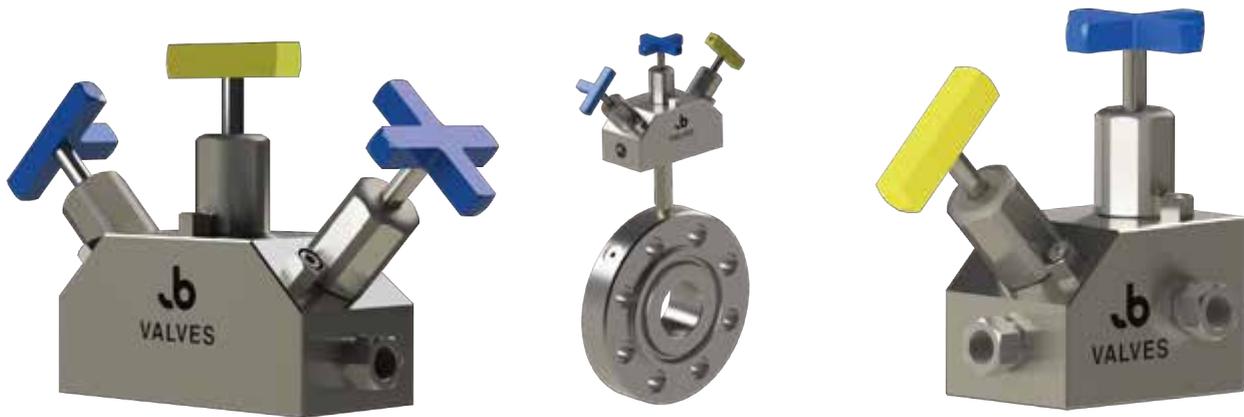
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JB Valves - Minimise Risk, Maximise Uptime & Driving Efficiency



JB Valves is an OEM valve manufacturer focused on minimising risk, maximising uptime and driving efficient solution deployment

JB Valves predominantly operates in the subsea space with a range of subsea needle valves, ball valves, check valves, shuttle valves, relief valves, couplers, and electrical connectors. Our standard offerings include single isolation, single isolation and bleed (SBB) and double block and bleed (DBB). Modular valve design allows for flexible valve configurations and combinations, facilitating schematic rationalisation and unrivalled reduction in potential leak paths. Essential experience and knowledge are the key to elegant engineering solutions; our team has process and instrumentation experience both topside and subsea providing our clients with a broad yet detailed understanding of their requirements.

What makes us different?

We are committed to the concept of continual improvement; our mission is to surpass the expectations of our clients and take a project from enquiry, through estimate and design to final build in weeks not months.

We believe that strong design fundamentals, R&D and testing are an accurate measure of the performance of a product. Some of the notable and ever expanding equipment on site: Environmental chamber -60°C to +170°C, Gas testing to 23,700psi and Hydro to 58,000psi, Mass spectrometer capable of vacuum and sniffer, hyperbaric chamber, flow rig, CMM by Faro, Solidworks Premium.

Bespoke configuration development

Our clients can look at ideal solutions away from standard configurations. Our fast turnaround turnkey solutions have a proven track record of saving crucial engineering time allowing for critical path timelines to be maintained. From simple port positioning and flow path configuration to extreme environmental consideration. An example would be to look at Brent Alpha decommissioned well monitoring, we developed an ATEX zone 0 - Subsea 1000m rated dual PTX. Within the Brent Alpha Leg, the environment is drained and flooded exposing the equipment to a potentially H₂S rich environment which becomes flooded for safety, this provided a technically challenging set of requirements, but the equipment has been successfully deployed for almost two years.

Obsolescence is driving operators to increase Maintenance, Repair and Operations (MRO) activities. Our approach is to provide product solutions that drastically reduce costs, improve resilience and enhance safety in service.

Legacy Library

We have established our legacy library to catalogue obsolete equipment; we work with our customers to build the legacy library to try and plug the information gaps. We happily receive equipment for review and assess the potential routes.

Legacy diver mate and stab mount couplers

We developed our core coupling to interface with many legacy couplers no longer available through being made obsolete and discontinued or manufacturers that no longer trade. We have supplied hundreds of legacy compatible couplings to major end users.

Our core product has passed our extensive endurance testing giving peace of mind in harsh applications. We have had hands-on experience with many of the obsolete equipment configurations and manufactured solutions to interface with many commonly used legacy couplers.

Legacy electrical connectors

We produce legacy compatible connectors for subsea wet mate applications. It is increasingly difficult to acquire or identify connectors that have been either in storage or have reached end of life; we work with our customers to solve this problem.

Looking to the future

We recognise that strong electrical understanding and capabilities with digital activities and processing are the key to efficient asset management, our enterprise-grade software developers can integrate existing and new systems into our cloud platform exposing relevant isolated data securely when and where it's needed.



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NEW MEMBER

Les Littlewood, Sales Director of Albion Valves (UK) Ltd, discusses how choosing the right kit can boost safety in industrial workplaces...



New guidelines introduced by the Safety Assessment Federation (SAFed) have once again brought the issue of health and safety in industrial environment to the fore, shining a light specifically on the dangers associated with industrial processes operated by high pressured systems

Les Littlewood, Sales Director of Albion Valves (UK) Ltd welcomes the increased focus that SAFed has brought to this area and believes the new guidelines bring more clarity and deeper understanding to operations.

It is a well-known and sobering fact that industries such as industrial processing and manufacturing, along with construction suffer the highest occurrences of workplace injuries and fatalities.

However, by adhering to a few simple steps it is possible that selecting the appropriate parts and not cutting corners can help avoid catastrophic risks associated with using the wrong valve for overpressure protection.

Although there has been improvement in health and safety at work, more can

be done to help further reduce the number of incidents including ensuring the products specified are fit for purpose.

The SAFed guidelines address the issue of replacing valves in a high-pressure system and make the case for getting it right first time. The guide focuses on areas such as optimal set pressure, discharge capacity of valves and design temperature of valves.

It also highlights the risks of using pressure relief valves instead of safety valves, a malpractice which has become increasingly problematic in recent years.

Les commented: "There has been a lot of confusion in the industry regarding the appropriate technology to use in pressurized systems, with many contractors using pressure relief valves.

In a pressurized system both safety valves and pressure relief valves are used as the last safety device, however engineers need to be mindful that requirements can vary significantly from system to system, and increasingly valves must now meet the EU's Pressure Equipment Directive (PED) to guarantee safety.

The guidelines will also help ensure that engineers are meeting their insurance conditions and not making false economies by sourcing cheaper and potentially unsuitable valves."

To help promote safer working environments, specifiers should be vigilant and ensure they have the correct accreditations - be it ATEX or PED or by ensuring the valves are anti-static if the environment requires it.



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The majority of Albion's distributors have customers operating in workplaces, where explosive atmospheres are commonplace. This includes environments where industrial processes may release flammable gases or poisonous vapours.

As such, Albion has added a range of fire-safe, anti-static, stainless steel ball valves to its portfolio, designed to prevent the leakage of hazardous substances from the valve in the event of a fire.

Anti-static valves are suitable for installations within the pharmaceutical and petrochemical industries, as well as a variety of other industrial processes dealing with oil, gas and other flammable media, where there is an increased risk of explosion if substances leak during a fire.

The anti-static device fitted on the valve, ensures that friction caused by the operation of the valve does not cause a build-up of static, which could potentially spark and have disastrous consequences.

The API 607 standard, which certifies the valves as fire-safe, looks at the performance of valves by establishing limits of acceptable leakage when they are exposed to defined fire conditions.

Valves that meet the API STD 607 requirements should be able to retain the pipeline media long enough for the fire to be extinguished - to avoid fueling the fire further. Fire-safe valves are also required to be operational after exposure to fire in order to move from the 'open' to the 'closed' position.

Similarly, another industry safety net is ATEX. The ATEX certification mark is designed to minimize the risk of fire or explosion arising from the ignition of dangerous substances in the workplace.

The ATEX directive applies to electrical and mechanical equipment intended for use in potentially explosive atmospheres including; mines, factories, sewage plants, biomass processing, oil and gas distribution.

As SAFed recognizes, high-pressure systems operating above 0.5 bar pose a significant safety threat to engineers and industrial staff. In this instance pipework, valves and fittings are required to be compliant with the Pressure Equipment Directive (PED) to ensure the equipment is able to withstand pressure and prevent system's bursting.



A common and potentially lethal occurrence in this situation is when relief valves are specified to do the job of a safety valve. Safety valves are the last line of defence in a pressure system, however engineers and specifiers need to be mindful that requirements can vary significantly from system to system.

In applications where PED is applicable, it is mandatory to use safety valves with the appropriate approvals. If a valve without type test approval is installed there is no guarantee that required blow-off at 10% would be reached, which poses a big safety risk.

Albion's range of safety valves is based on a traditional model; they have been improved to bring them up to date with modern valve design and performance. They come with a unique 2-piece spindle to ensure they are safe and tamper-proof even if some form of external restraint has been applied.

Safety valves are all either set, sealed and certified by the factory, or onsite at Albion on a test rig prior to dispatch. Each valve is laser etched with its own unique serial number to allow certification to be traced.

Les added: "It is important to realise that the liability for using a non-conforming product rests with the installer, and that contractors can be in breach of insurance conditions by installing any non compliant parts. This is why Albion recommends using a certified safety valve wherever possible and making safety a priority."



Les Littlewood, Sales Director of Albion Valves



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New by-pass constructed using Drallim Rotary Selector Valve (RSV)



In some processing plants, liquid chemicals are stored in large vessels where the fluid flow into and out of each vessel is controlled by in-line valves

Pneumatic control of the actuators that open or close these in-line valves is generally accomplished by sending an electrical signal from the control centre to remote solenoid valves that in turn pressurise or vent the actuators. This forms part of the process at nuclear power stations that require high quality feedwater used for cooling. Domestic towns water is processed to produce demineralised (pure) water for boiler feed purposes.

On occasions, for example to overcome failure or carry out planned maintenance, it is necessary to by-pass the automatic process and therefore the aforementioned solenoid(s). Installation of a Drallim rotary selector valve (RSV) enables manual override of this automatic control by providing an alternative airpath.

Single acting actuators (for instance those which spring return when the electrical signal is removed and hence no pressure is supplied to move the actuator) are controlled by a single pneumatic signal. These can therefore be bypassed using a single bank RSV having one airpath through. Double acting valves that require one side to be pressurised whilst the other vented side is piped away employ a 2 bank valve. Multiple actuators can be controlled by a single RSV having up to six separate banks.

Each RSV bank is pneumatically independent but linked by a common central spindle, enabling separate air paths to be controlled concurrently; each output is effectively a valve in itself. The RSV can incorporate an integral electrical rotary switch which allows fluid and electrical circuits to be controlled simultaneously, or can be used simply to provide positional indication remotely at the control centre.

Drallim RSVs and tube couplings were specified and installed in the Make Up Water Treatment and Condensate Polishing Plants at a number of nuclear power stations throughout the U.K. when they were originally brought into service. Many of these valves therefore date back to the 1970's and 1980's and are still in service. As part of on-going improvement projects some are however being replaced, along with associated pneumatic equipment which includes the aforementioned solenoid valves.

The ageing of perishable internal seals is a contributing factor in making this decision, as the valves themselves are still serviceable.

Initially Drallim were tasked to carry out site surveys and produce recommendation reports, together with CAD generated circuits. The reports listed possible areas for improvement and demonstrated a thorough understanding of the operational requirements. Drallim are not only supplying the RSVs, but the complete replacement pneumatic control consoles, which they design and build in-house. On-site installation and commissioning is also carried out by Drallim staff.

The RSV is a rotary selector or distributor for use in small bore piping systems at pressures up to 10bar. It is a relatively simple and therefore extremely reliable unit, based on a modular design and as such configurable for a multitude of applications. It is custom built from stock parts. The PIV body is manufactured in brass or stainless steel, both having stainless spindles, and can have stems and seals in differing materials to suit the media being used.

The valve was first introduced in the late 1950's, has remained largely unaltered, and due to its versatility is widely used in industry for a vast range of applications involving the switching of liquids, vapours and gases.

The same technique as described in this application is employed in automated manufacturing plants where manual override in safety critical situations is required. The RSV is used extensively in hostile environments such as offshore platforms.



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Advanced Valve Solutions, Start-Stop Operation Summary

The AVS Attemperator Solution

Introduction

The worldwide introduction of wind, solar power and other renewables create an increasingly flexible demand on gas fired power stations to balance the grid.

To operate in a reliable, quick, modulating and start/stop regime, some improvements are necessary.

To start and to stop a modern CCGT installation takes time, it cannot be done instantaneously. The gas turbine should be warmed through as well as the rest of the power plant, the HRSG, (Heat Recovery Steam Generator) downstream of the gas turbine, the interconnecting steam pipework, the steam turbine and all other balance of plant items.

This all must be done as quickly as possible to limit the starting costs and to supply as soon as possible to the grid. In the European markets the driving factor is high fuel costs, reducing the need for full speed no load, however in the USA the driving factor is to reach emission values as soon as possible.

For all CCGT plants the demand for being reliable and the need to be able to start the installation, to supply to the grid, is the single most important driving factor.

What Is Influencing This Reliability?

Primarily, the thermal stressed components of the boiler are representing a severe risk such as thermal fatigue in drums, headers, down comers and piping.

Secondary, components like the inter-stage and final attemperators, the HP and IP bypass valves, the main steam stop valve and stop check valve and the hot reheat gate valve are seeing extreme heat gradients causing thermal stresses.

Thirdly, components such as drain valves, feed water control valves, startup blow off control valves, OTC level control valves in GT 24 and GT 26 turbine installations are also experiencing increased Flow Accelerated Corrosion (FAC) due to an increase in the flashing and cavitating conditions.

Further to this, the steam turbine itself is a crucial component to ensure the run up of the unit allows for gradual and controlled heat input.

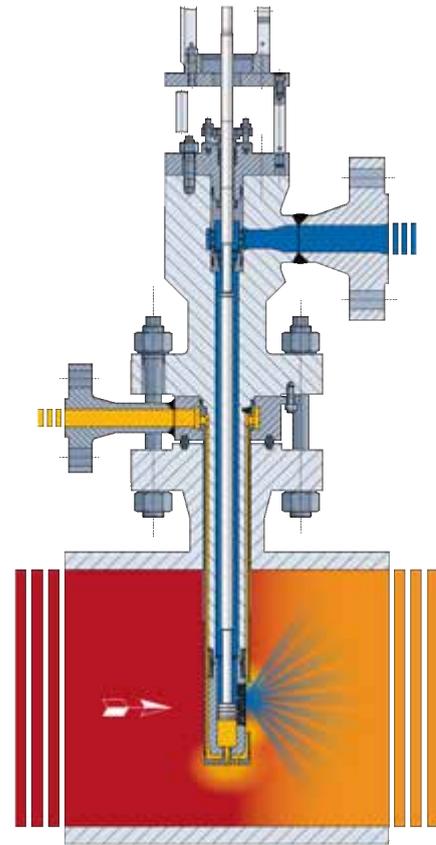
The AVS Attemperator Solution

Steam attemperators, steam coolers or de-super heaters main purpose is to cool super-heated steam by spraying water into the process. Multi nozzle/fixed nozzle mast type and ring style attemperators are the most common used types.

The main issues to overcome for these devices is the creation of fine droplets, in combination with a wide range ability.

The multi nozzle mast type attemperator provides a constant pressure drop over the nozzles in all flow conditions, guaranteeing the smallest droplet size over the full range ability (1:100).

Ring style attemperators and fixed mast types have a limited range ability in which adequate sized droplets can be formed. They do not have a constant pressure drop, which is needed to create a minimum droplet size over the full range.



Secondary is the thermal stress problem. Located in the hot steam flow, the attemperator body or the nozzle heads are subject to the superheated steam temperature and quickly heat up to the super-heated steam temperature.

When attemperation is required, "cold" water is injected, causing thermal shock in the nozzles and valve bodies, due to the great temperature differential between cooling water and the components, which leads to unpredicted damages and emergency shut downs.

Cooled Attemperator

The "Cooled Attemperator" is the only steam cooling device which can operate without thermal shock. A small flow of saturated steam is continuously fed into a cooling jacket around the mast, keeping the attemperator body and mast at a low temperature. This cooling steam passes over the nozzles and is then mixed up again with the main steam.

AVS have installed multiple cooled attemperators across the European Market and all are working reliably and have eliminated the thermal stress problems completely.



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When is a butterfly valve the right choice?

Adrian Croft, Product X-Pert, Weir Valves & Controls UK takes an in-depth look at the key considerations of butterfly



Selecting the right valve for a process application is always quite tricky, as ever cost is one of the most significant driving factors, but there are many other factors that should also be considered in order to get the right valve performance. In this blog I will highlight some of the considerations in selecting a control butterfly valve.

Can it handle the pressure?

In short, a butterfly valve is one of the most economical valves available, but it might not be able to handle some of the process conditions, such as a high velocity line fluid. In these situations it might be more appropriate to use a globe valve.

Where there is a low dynamic pressure drop of less than 3 Bar (Pressure INLET – Pressure OUTLET) for each flow condition a butterfly valve is generally the best solution. However for higher dynamic pressure drops, please consult your valve expert as these should be reviewed on a case by case basis.

When thinking about the valve shut off pressure, often a butterfly valve has a shut-off pressure of less than 10 bar. Where the shut off pressure is higher the use of a butterfly valve needs to be carefully considered – in these circumstances a globe valve can be opened against a high differential pressure whereas a butterfly valve may bind and runs the risk of becoming inoperable or additionally the valve's seat could score and leak.

Lining is important

The simpler structure of a butterfly valve means that the valve can be lined/coated relatively easily. A large part of the butterfly valve market is for vulcanised rubber valves which typically protect against corrosion from the process fluid. The use of rubber lining should be limited to 10 bar.

Butterfly control valves are often specified for high temperatures, their simple design means that they can be applied to high temperature applications of around 1200°C, in these cases the valves are lined with refractory materials.

Low emission applications: it's butterfly valves all the way!

The rotary motion of the butterfly valve is particularly suited to low emission applications where the turning motion of the valve shaft generates less distortion and damage to the packing rings and therefore the packings typically have a longer life than equivalent rising stem valves.

Seat leakage

The seat leakage requirement is key to selecting the right butterfly valve. They are produced in various forms, from concentric, double offset (high performance) to triple offset.

Concentric designs are applied where seat leakage is not a concern. In these designs the body and disc has a clearance flow. Double offset designs are typically applied for control applications. Triple offset designs are mostly used for isolation applications where tight shut off is important.



The movement of the disc on a triple offset design means that the seal ring has little or no contact with the valve body and therefore the turning of the disc does not generate any damage to the seal.

You could save on construction costs

There are no fixed rules for the weight and space requirements for the valve; however, the weight of a butterfly valve is normally at least half of the weight of the same size globe control valve.

This offers the customers advantages in saving costs in the procurement and construction phase, when considering structures, structural support and handling.

Understand the maintenance strategy

One of the main considerations with most butterfly valve designs, is that the valves need to be removed from the piping for any internal repairs - so it is important to understand the site maintenance strategy before installing your final solution.

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Hardide Coatings invests for further growth in North America

Advanced surface coating technology company Hardide Coatings has appointed Mark Hanania as Business Development Engineer based in Houston, Texas to help drive growth in the oil, gas and energy sectors throughout North America



Strong growth in demand from oil and gas customers in North America and recent entry into the aerospace market is underpinning significant investment in coating technology and quality accreditation at the company's US coating facility in Martinsville, Virginia.

A third coating reactor will be installed by fall 2018 to accommodate increased demand from major oil and gas operating and service companies. The Martinsville facility is on-track to receive accreditation to aerospace quality management standard AS9100 during summer 2018.

Mark Hanania joins Hardide Coatings, Inc. as Business Development Engineer - Oil, Gas & Energy, North America from 3M Canada where he was responsible for driving 3M innovation into the Alberta/British Columbia oil and gas markets. He brings 20 years of engineering and business development experience, previously spending more than 13 years with Hilti Canada where he held several engineering roles. Mark has a B.Sc. in Mechanical Engineering from the University of Calgary.

Philip Kirkham, CEO of Hardide Coatings said: "We are seeing a strong rise in demand from oil and gas customers in North America and Mark's appointment will enable existing North America VP Business Development, Dan Wilson, to concentrate on other high-tech markets including aerospace, where we believe there are significant opportunities throughout the region."

"We are expanding our capacity in the USA with investment in people, equipment and technology supported by the highest, aerospace quality standards."

Customers for Hardide coatings include leading companies operating in oil and gas exploration and production, valve and pump manufacturing, precision engineering and aerospace industries. The company has manufacturing facilities in Oxfordshire, UK and Virginia, USA.



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DATE & TIME

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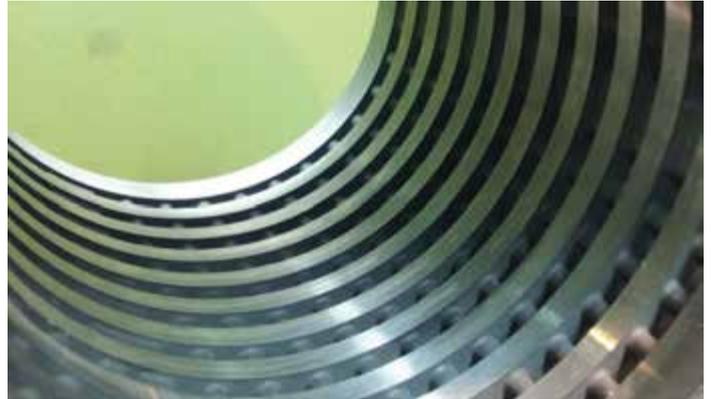
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At Weir Valves & Controls UK, we are regularly contacted by new and existing customers who are looking for a method of reducing regular valve failures – many of which would ideally like to avoid the expense and down-time associated with replacing the complete valve assembly. Control valves in particular are traditionally quite a complicated solution, by their very nature they are subjected to high pressure drops, which could, if not properly controlled cause damage to the valve.

It is for this very reason our engineering experts have developed the control valve X-Stream™ trim. The X-Stream™ is a multi-stage trim for severe service applications and is proven to solve problem applications such as cavitation, erosion and noise.

The reaction to this solution being made available to the market has been overwhelming – our teams are seeing increased numbers of end-users specifying the X-Stream™ trim in new valves when dealing with difficult processes.

But what about existing installations?

In processes where existing valves are in place, our customers wanted a solution to upgrade their valve trims with an X-Stream™ trim solution.

By retrofitting a new trim, into an existing valve the customer can eliminate the cost of replacing the complete valve pressure envelope which ultimately reduces the time needed to install a new trim.

One such valve issue was discovered at the Umm Al Nar power plant in the Middle East where the existing Minimum Flow Control Valves suffered from regular trim failures due to erosion caused by high pressure drops. The end user consequently had a high spares turnover due to regular trim replacements.

The valves in question were being asked to control:

- Inlet pressure 137 Bar A
- Outlet pressure between 4.6 and 2.1 Bar A
- Vapour pressure 4.574 Bar A

This customer's application had a number of difficulties and our team invested the time and effort in fully understanding the customer's issues. Fully understanding the application and the process conditions is the first step in providing a suitable trim solution.

After checking the full process conditions our team discovered three significant reasons for the customer's poor valve performance:

1. **High Pressure Drop** – on liquid service, valves can result in high levels of erosion if not adequately controlled by the valve trim.
2. **Cavitation** – based on the valve outlet pressure of 4.6 Bar A, and the vapour pressure of 4.574 Bar A, the valve, with a conventional trim would be subjected to high levels of cavitation. The valve trim needed to be specified with multiple stages of pressure reduction to eliminate cavitation.
3. **Flashing** – based on an outlet pressure of 2.1 Bar A, and a vapour pressure of 4.574 Bar A, the valve process conditions meant that the fluid is flashing. Flashing cannot be prevented and can be highly destructive.

The X-Stream™ was identified as an ideal solution given that it is designed to gradually reduce the pressure over multiple stages of pressure reduction to minimise the effects of pressure drop. Also, controlling the fluid velocity by using an X-Stream™ trim helps to reduce the effect of fluid impingement which ultimately causes erosion across the valve trim.

After our analysis, our team then worked closely with the customer to obtain one of the existing valve assemblies for a short period. Where valve teams in the UK and Dubai worked together to dismantle the valve and used 3D laser scanning technology to accurately capture the component data and produce 3D CAD models of the valve components.

Once the original valve was fully modelled this allowed the team to produce a complete set of detail drawings for a new trim.

The cage section of the X-Stream™ trim was produced by state of the art Selective Laser Melting (SLM) technology where steel components can be printed directly from a 3D model.

Printing the X-Stream™ trim meant that high technology aerofoils could be introduced into the trim design which allows a smoother transition of the flow from the inlet to the outlet of the trim. Further, the trim was designed with a replaceable cartridge, where the X-Stream™ trim section could easily be unbolted and replaced as a unit, rather than the customer having to replace the whole cage.

Once the full replacement trim was fully produced and once the existing valve became available on site, the valve was then completely stripped, the existing trim removed and the replacement X-Stream™ trim fitted.

We're delighted to say that the complete valve was re-built without any issues experienced and fully pressure tested before installation. The customer is now benefitting from the increased performance offered by the X-Stream™ multi-stage trim without any valve replacement costs incurred.



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Chinese pipeline selects Rotork ELB for increased line break safety

The Rotork Electronic Line Break (ELB) is a robust, self-contained system that combines pipeline pressure monitoring with intelligent valve control

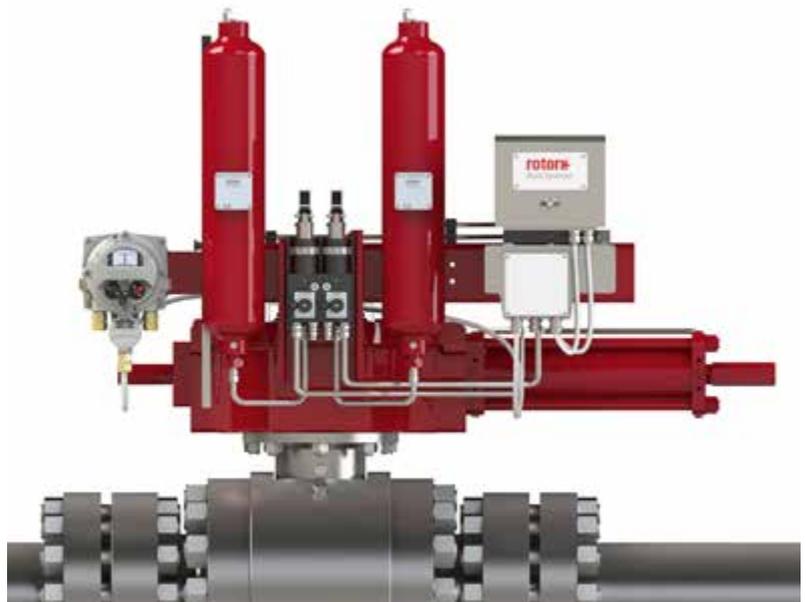
It continuously monitors upstream and downstream pipeline pressure dynamics to provide early detection of pipeline breaks and initiate automatic valve actuator movement to a pre-selected emergency position.

In one recent contract Rotork GO (Gas-over-Oil) pipeline actuators have been fitted with ELB units for line break monitoring and protection on remotely installed valves on a natural gas pipeline in China. The ELBs will enable the operator to monitor the running condition of the gas pipeline and the open/closed status of the valves. The immediate reporting of a line break by an ELB will enable the operator to swiftly close the appropriate valves and isolate the problem.

The ELB is housed in a compact, environmentally sealed and explosionproof housing that can be mounted on the actuator or remotely. Valve actuator control - selectable as fail close, fail open or stay put - is based on Rate-of-Drop (RoD) and Rate-of-Rise (RoR) of the pipeline pressure as well as high and low pressure limits. A remote Process Shut Down (PSD) input with the option to override all functions is also available to drive the valve to the pre-determined fail position.

The ELB also provides an array of programmable alarm and alert indications and has an extensive range of features that can be configured to meet end users' specific requirements. These include up to six remote inputs and four configurable solenoid outputs, Partial Stroke Testing (PST) and Modbus® network connectivity.

Setting menus displayed on the large HMI window are the focus for non-intrusive programming and commissioning using Rotork IQ intelligent electric actuation technology. In normal mode the LCD display indicates valve position. The same window also displays visual indication of status, alarms, event, trend and operation logs and diagnostic data.



Rotork GO actuator fitted with ELB as supplied to the Chinese natural gas pipeline to provide increased line break safety

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Webtec set to expand portfolio with VFD120E



Webtec, a specialist manufacturer of hydraulic measurement & control products, is introducing its new VFD120E electric-operated variable-priority flow divider

Designed particularly for use on mobile machinery, it allows the speed of hydraulic motors on trailed agricultural attachments and on mining and construction machinery to be controlled remotely. The 420 bar rated VFD120E offers greater levels of efficiency than previous generation products when it is launched in the third quarter of 2018.

As a three-port pressure-compensated variable-priority flow divider with an electric drive motor, the VFD120E can provide constant flow to a primary system while still powering a secondary system. To explain in more detail, priority-type flow dividers split a single input flow into a 'priority' (regulated) flow and a 'bypass' (excess) flow that can be returned directly to the oil reservoir or used to power a second system.

This capability is possible thanks to the valve's adaptive pressure compensation characteristics, meaning both the priority and bypass flows can be used to drive separate circuits, even under fluctuating loads. In many instances, this functionality eliminates the need for another pump to operate a second system.

Developed for mobile applications, the new VFD120-E can be used to control hydraulic motor and cylinder speeds by applying voltage to the valve, which in turn controls the flow rate. Importantly, Webtec has ensured that the design of the VFD120-E has been optimised to minimise pressure losses across the valve, substantially reducing the energy wasted in the form of heat.

The new IP66-rated flow divider is available in multiple variants offering a maximum working pressure of 420 bar and total flow capacity up to 120 lpm. Remote control is via a toggle or rocker switch, with no external control box required (all electronics are self-contained within the canister). Various common port thread options can be selected to suit the application in hand. Customers can also choose between a 12 and 24 Vdc motor.



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Introducing Laser Ltd



Laser Limited, the Nottinghamshire based laser cutting and sheet metal fabrication company announce plans to increase their production capacity due to the on-going demand and ever increasing customer base

What started as a business set up in June 2016 to supply sister company Quickkits Limited has since turned into a thriving business with over 300 customers supplying laser cut and fabricated components on a global scale. Achieving on-time delivery targets of 95% + on a consistent basis, no minimum order charge, same day service and FREE edge deburring is what appears to have propelled the business to where it is today.

With sales targets literally being smashed month on month plans are in place to expand production due to the ever increasing demand from both existing and new customers. Working as a dedicated and determined team the desire to be the first choice supplier in the industry is high on the agenda and our teamwork is paramount to this.

Having achieved ISO 9001:2015 back in April 2018 and as part of the QK Group of companies the team at Laser are passionate about the quality and service that they provide.

Rob Smith, QK Group Managing Director comments, "We took the decision to set up Laser Limited due to the repetitive poor quality and service that we experienced from numerous laser suppliers over the years. At a time when the valve and actuator industry was on its knees due to the low oil price investing over £1million in such a

venture may have been daunting for some but I could see the vision of what we could achieve. It's a credit to the team at Laser to have taken the business from a standing start to where it is today."

Laser Limited supply a vast array of products to the valve and actuator industry including but not limited to mounting brackets, locking devices, accessory panels, sun shades, linkage kits, hand wheels, flanges, valve levers and valve tags.

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NEW MEMBER

Digital pneumatics: breakthrough in fingerboard control, safety, reliability



The advent of digital pneumatics promises to change how machines and processes are designed and managed throughout the industrial world

It's a technological disrupter with exciting potential applications in oil and gas exploration and production. For example, Festo has used digital pneumatics to control and monitor latch opening on the fingerboard of an oil exploration platform. The benefits include cost and time savings in installation, a reduced safety risk for employees, lower energy cost and increased reliability through preventive maintenance.

The pneumatically based fingerboard-latching system for drill-rig tubulars safely indicates the exact locked or open position of each latch. This system operates reliably in harsh water- or land-based drilling environments and eliminates hard to maintain wire harnesses and electronic sensors on Fingerboards.

This next generation pneumatic solution indicates to derrickhands on a colour touchscreen display the exact open or closed position of every fingerboard latch. The reliable, rugged pneumatic system eliminates the need for wire harnesses and electronics on fingerboards.

A Festo application team developed this drilling industry solution utilising the Industry 4.0-based VTEM Motion Terminal. The VTEM Motion Terminal is the world's first digital pneumatic system. Downloadable apps create an almost unlimited number of functions for the motion terminal. A single motion terminal can replace 50 different hardware components based on its combination of apps.

The VTEM Motion Terminal with fingerboard-latch app measures the position of each latch from closed to 100 percent open by analysing cylinder air pressure and flow. The system can display measurements graphically via human machine interface (HMI) or communicate to a supervisory controller. Each VTEM smart valve in this application replaces two ordinary pneumatic valves for a 50 percent savings in the number of valves utilised. Using the VTEM Motion Terminal in this application delivers cost and labour savings, improved operational reliability and energy efficiency, and enhanced safety when compared to existing control and monitoring solutions.

The fingerboard solution also features cylinder seals enhanced for extended life in the specific environment where the rig will be located and a long-wearing corrosion-resistant coating that covers the exterior of each cylinder. Festo helped to lower time to market for OEMs by pre-assembling control cabinets.

"We've had considerable feedback from companies in the drilling industry that unlatched tubulars such as drill pipes and casings are an ongoing safety challenge," said Craig Correia, Director, Process Industries, North America, for Festo. *"When you try to solve this safety challenge by installing electronic sensors and associated wiring 75 feet or more above the deck, they must be robust enough to handle extreme temperature swings, impervious to highly corrosive environments, and explosion-proof."*



"All are difficult requirements for a reliable and serviceable electronic-based system. The Festo pneumatic solution eliminates electronics on the fingerboard by moving the intelligence to a decentralised cabinet and provides for superior position monitoring."

Using a Festo Motion Terminal VTEM applies a new technology – digital pneumatics – to controlling and monitoring latch opening and closing on oil rig fingerboards.

While performing all the functions of a conventional valve terminal, VTEM also conducts wire-free monitoring of the pneumatic cylinder to provide feedback to the control room on the position of each latch.

This eliminates the need for a hazloc-compliant wired sensor on each cylinder, removing that ignition source from the fingerboard and generating significant labor and other cost savings associated with the installation and maintenance of wired monitoring.

Motion Terminal software apps also can perform system diagnostics as part of preventive maintenance and increase energy efficiency throughout the pneumatic system. With these potential benefits, VTEM-based pneumatic latch control and monitoring can deliver a lower total cost of ownership, while reducing safety risks and improving operational reliability compared with conventional control and monitoring solutions.



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EnerMech Get £21 Million Cranes Contract Lift

EnerMech has secured a new cranes and lifting services contract with an international Operator in the North Sea and extended terms on a number of existing contracts which are worth in excess of £21 million



The integrated engineering services specialist will provide crane maintenance and crane management to three North Sea platforms on behalf of the new client. The multi-million-pound five-year contract, with five one-year options, includes offshore crane maintenance and operation, onshore support and repair facilities, crane spare parts, engineering, and consultancy support.

In addition, Aberdeen-headquartered EnerMech have also secured a three-year extension to their existing cranes and lifting services contract with Maersk Oil UK for the Gryphon Alpha and Global Producer III FPSOs and the new Culzean gas field assets in the North Sea.

These awards are further complemented by a one-year extension for Dana Petroleum's Triton and Western Isles assets, along with a two-year extension for Spirit Energy's Morecambe Bay assets for crane management services.

EnerMech's UK director of mechanical handling services, Chris Dixon, said: "Our continued focus on delivering value by provided integrated services with careful cost management is winning us new cranes and lifting service clients and extending relationships with existing customers."



"We are looking forward to forming a strong partnership with this new North Sea client and we believe our template for providing high quality combined services is an attractive offering to UKCS and international Operators."



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Maher Ltd requalifies for the Achilles Joint Qualification System (JQS)



Within its group Maher has an impressive range of machining capabilities

Maher Ltd has recently requalified for the Achilles Joint Qualification System (JQS) for suppliers to the oil industry in Norway and Denmark



The Sheffield based stockholder has been supplying high performance alloys to the Norwegian market for years and by requalifying for JQS, shows its continuous commitment to this market.

Achilles JQS is a supplier register and pre-qualification system used by the buyers in the Norwegian and Danish oil and gas sector to manage supplier information and risk within the supply chain as well as to procure efficiently in accordance with EU regulations.

The Norwegian Offshore market is part of one of the most demanding sectors in the world. Health and safety, environment, quality management and documentation are very important. Holding the Achilles JQS certification means that Mahe Ltd can easily demonstrate that it has robust systems in place across a wide range of key business activities and that these are being consistently implemented to the high standard which is required.

Mahe Ltd's sales engineer, Robert Simpson, who works closely with the company's Norwegian customers, said: *'I'm pleased that our hard work has been recognised by Achilles once again. The qualification is very important to our customers and a great way for us to demonstrate our continual improvement.'*

Robert will also be attending Offshore Northern Seas (ONS 2018), which is held in Stavanger, Norway from 27 August 2018 - 30 August 2018, where he will be happy to discuss Mahe Ltd's capabilities.



Alloy 718 valve stems

In addition to its core stock holding business of nickel and special alloys such as 718, 625, 725 and K500 to name a few, the business has also heavily invested in its comprehensive in-house machine shop. Along with first stage machining Mahe Ltd can offer many finished machined components. Through experience the Sheffield based company understands the special materials they stock and how they behave under machining, which means that they are also a great partner for first article and R&D requirements.



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Irish Water chooses Rotork for penstock upgrade



As part of a major modernisation programme at the Kilkit Water Treatment Plant in County Monaghan, Irish Water has installed Rotork's intelligent CKc range of modular electric actuators at the site

In a contract awarded to Rotork by Coffey Water Ltd., inlet penstocks have been automated with CKc actuators to provide reliable on/off control, position monitoring and data logging of operating history to support asset management.

CKc actuators were selected as they offered a fully compliant and cost effective solution to meet the desired specification of the application, which included a quick delivery schedule. In addition to supplying, installing and commissioning the actuators, Rotork's responsibilities also included the design and fabrication of the adaptation components required to automate the previously hand operated penstocks. Rotork worked closely with the contractor to provide a comprehensive and fully engineered solution.

The penstocks are now fitted with CKc double-sealed actuators which are certified IP68 watertight and temporarily submersible (8 metres for 96 hours). Increased penstock protection is provided by independent torque and position sensing, continuous valve position indication, even during power loss, and a safe, motor-independent handwheel.

CKc actuators incorporate the Centronik integral starter and control module providing local control switches, monitor relay and a datalogger enabling data extraction for analysis, diagnostics and asset management. CKc actuators also feature simple, rapid and secure commissioning and configuration using local controls or a Rotork Bluetooth® setting tool.

The modular CK design provides flexibility to suit individual applications, whilst plug and socket connections between modules assist efficient installation, commissioning and maintenance.

The penstock project is part of a contract for Irish Water to upgrade the Lough Egish Regional Water Supply which will see a €4.5 million investment in the Kilkit Water Treatment Plant to benefit approximately 12,000 consumers in County Monaghan.

Once completed the upgraded treatment plant will have an increased design output of 5.5 million litres per day (MLD) which will ensure that current water demands can be met, with capacity to meet future development needs.

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OEM Group and EnerMech Sign Global Cooperation Agreement



OEM Group and integrated engineering services specialist EnerMech have signed a three-year worldwide collaboration agreement to identify opportunities to deliver engine support services through EnerMech's global service centres

The agreement will see OEM supply EnerMech with crane engine services and upgrades and spare parts, as well as provide technical support including engineering and project management on a non-exclusive basis to EnerMech's global client base.

Formed in 2012, Aberdeen-headquartered OEM is an international group of businesses offering a range of engine services, spare part procurement and fuel conditioning to safety-critical sectors. The firm has been working with EnerMech in the UK since 2016 and recently OEM and EnerMech signed a three-year agreement to provide a Qatar-based oil & gas company with engine field support services covering all diesel engines.

EnerMech operates across 40 global locations with a presence in the UK, Africa, the Americas, Australia, Asia, the Caspian region, the Middle East, and Norway.

OEM managing director, Barry Park, said: "Our team has successfully completed numerous ad-hoc campaigns for EnerMech in the UK and in other parts of the world to help ensure the crane engines under EnerMech's control remain well maintained and operational.

"It is through the development of this close working relationship, as well as having reliable personnel with an ability to deliver exceptional work in each timeframe, that has contributed to us formalising this relationship further. We also have very strong supplier relationships which enables us to procure any necessary spare parts around the clock from anywhere in the world. We look forward to continuing our strong working relationship with EnerMech globally."

EnerMech's international mechanical handling services director, John Morrison, added: "We always look to collaborate with like-minded businesses where it can add value to our end-clients. The association with OEM Group has proven successful across a range of cranes and lifting projects and we are pleased to extend this relationship which offers benefits to both companies and to our clients."

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The Secondary Engineer® 'Fluid Power Challenge' To Be Extended to Cambridgeshire Schools



The successful national programme, The Secondary Engineer® Fluid Power Challenge, which aims to attract secondary school pupils into engineering is being launched into schools in Cambridgeshire and East Anglia

The project is set to run during 2018/19 and aims to introduce over 200 14-year olds to the fun and challenge of building a pick and place robot arm using low cost materials and fluid power principles.

Fluid Power Challenge is run by the not-for-profit Primary Engineer Programmes® and is supported by many companies including WEBTEC and Cambridgeshire Hydraulics, as well as numerous trade associations including British Fluid Power Association (BFPA), British Compressed Air Society (BCAS), and Construction Equipment Association (CEA).

The Secondary Engineer® Fluid Power Challenge is a pneumatics and hydraulics systems project which gives schools the opportunity to engage in basic engineering principles and concepts, using readily available materials to design and build working systems. Not only does this support the study of STEM (Science, Technology, Engineering, Maths) in a practical manner but allows pupils and teachers the opportunity to work with engineers in the classroom and compete against teams from other schools.

Teachers from secondary schools in East Anglia area will be invited to attend a one-day practical training course, to be hosted by WEBTEC on 18th July 2018, at the company's St Ives manufacturing facility. Engineers from WEBTEC and other local companies will be partnering schools and supporting teachers on the training day and after with pupils in the classroom.

Martin Cuthbert WEBTEC's Managing Director commented on the project, "the Fluid Power Challenge is well named; this initiative has the power to inspire the engineers of tomorrow, to let children

have fun building a real-life robot arm and at the same time connect industry and schools during the learning journey. We are delighted to support the Fluid Power Challenge as we urgently need to attract the next generation of engineers and all credit to the Primary Engineer team for making this possible."

WEBTEC is dedicated to increasing the knowledge and skills of its employees, customers and the wider community and this latest sponsorship strengthens its commitment to the next generation of engineers along with its support of programmes such as the Arkwright Scholarship Trust and Engineering Education Scheme.

Further information can be found at the Secondary Engineer website at www.secondaryengineer.com



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The Small actuator launch will coincide with the release of our Android App.

Our new App ensures an intelligent and easily operated actuator with advantages like no other within the current market.

Whilst our Actuators still offer a 75% energy saving we continue to innovate smart



solutions. The Smart Actuator Company has developed an easy and efficient platform that improves communication with SmartAct Actuators for both our existing and new customers.

An online portal system that can be operated with any Android device allows customers to access their purchased products, monitor the configuration and add or remove features right then and there.

It even has a torque detection function which auto detects the torque requirement of the valve for initial set-up and configuration.

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Curtiss-Wright's Farris 3800L Series Pressure Relief Valve Receives ASME Approval



Curtiss-Wright's Industrial division has announced that its Farris Engineering business unit has received ASME Code Section VIII certification for the 3800L Series pilot operated pressure relief valves with modulating pilot controls (PCM) for use in air, gas and vapor service. Previously, the 3800L was only certified for liquid service



The addition of air, gas and vapor certification allows for the Farris 3800L with PCM control to be ASME Code stamped for use in both compressible and non-compressible services. The availability of a pilot operated relief valve certified for both compressible and non-compressible services provides for an attractive option in applications that can experience two-phase flow.

Operators typically have to choose between using a liquid or vapor certified pressure relief valve which will generally only perform properly under one type of service fluid. The 3800L with PCM control offers plant operators greater assurance that the relief valve will operated as intended during an overpressure situation in both compressible and non-compressible services.

When the 3800L is used for more than one fluid type or for two phase flow applications, the nameplate may be marked with both an air and liquid certified capacity and ASME Code Stamped.

There is no change in the overall valve design or spring selection. Valve opening pressure remains within ASME Code tolerances regardless of the relieving fluid condition. To learn more about Farris' 3800L with PCM control product offering, please visit our website.



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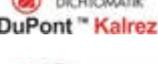
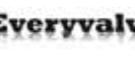
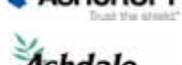
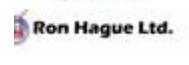
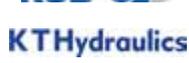
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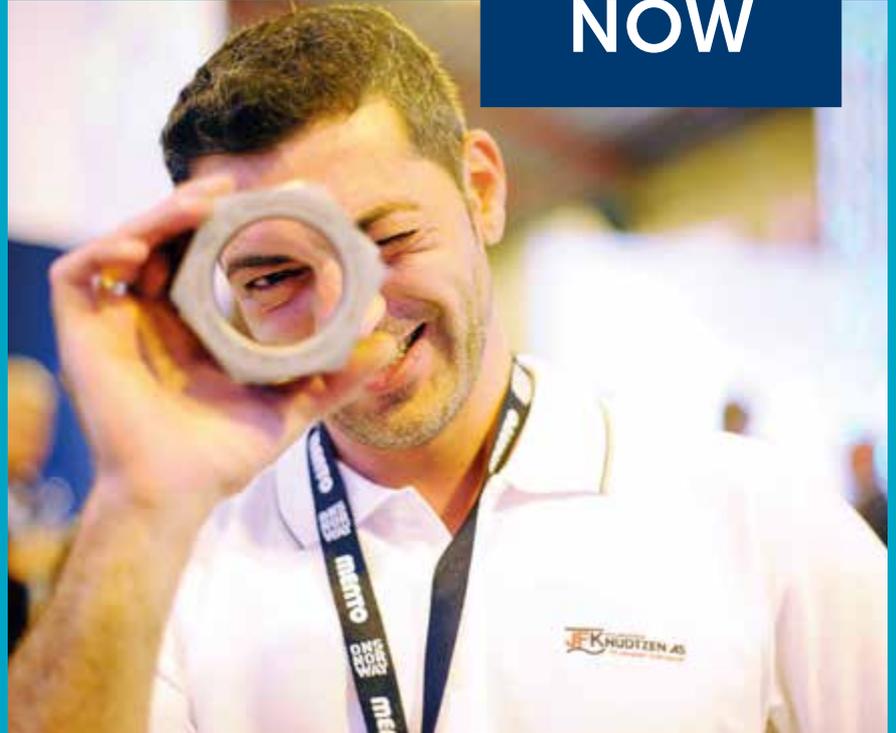
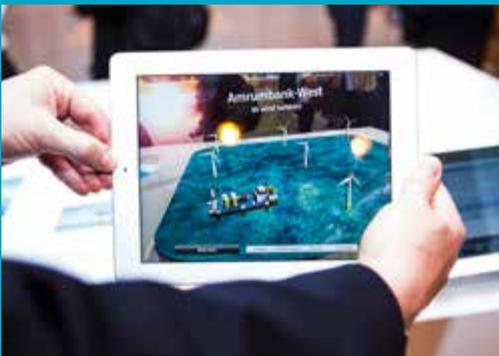


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