



ENGINEERING MAINTENANCE SOLUTIONS

The International Magazine For Maintenance & Engineering Professionals

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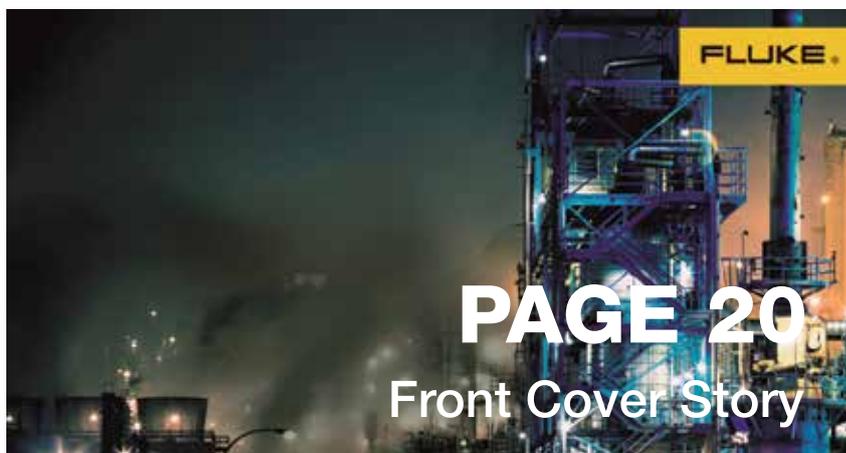


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Proven Protection For Data Centres

Rittal has updated the DET-AC III product family, comprising the DET-AC III Master fire alarm and extinguisher system, the complementary DET-AC III Slave unit and the EFD III early fire detection solution. All three are available in the form of 19" slide-in racks.

Significant enhancements have been made to the DET-AC III Master. The system now features a CAN bus interface for direct integration with the Rittal CMC (Computer Multi Control) III monitoring solution. This provides administrators with much more detailed information on the status of installations and incoming alerts.



A new USB interface greatly simplifies service and maintenance of the DET-AC III. This allows service technicians to view information on operational status and events, modify configurations, reset service intervals, or install new firmware from a laptop, without opening the enclosure.

Taking up one U in a 19" rack featuring a two-stage smoke extraction system, two highly sensitive optical sensors detect even the smallest smoke particles at very early stages and can sound an alarm from 0.25 per cent obscuration per meter. If the first sensor detects smoke aerosols, a pre-alarm is issued. If the second sensor also detects smoke, the main alarm is triggered and the extinguisher is activated.

Using the 3M NOVEC™ 1230 fire suppression solution, the system was the first in its class to successfully pass comprehensive VdS testing. It is environmentally friendly, does not conduct electricity and does not damage IT equipment.

All systems are available for immediate shipment and replace previous versions.

Tel: 01709 704000 | e-mail: information@rittal.co.uk

Denso Steelcoat Protects Edinburgh's Water Supply Aqueduct

A £2.6 million upgrade of sections of the 45 km-long Talla aqueduct used by Scottish Water to supply most of Edinburgh's water has been completed by contractor George Leslie Ltd, with Jacobs being the Consulting Engineers.

Built in Victorian Times, the aqueduct takes raw water from the Talla and Fruid reservoirs in the Scottish Borders to Edinburgh's modern Glencorse water treatment works.



For most of its length the aqueduct runs as a tunnel, split by several bridges and siphons. It is capable of taking up to 127 megalitres of water per day. Following visual inspection of the tunnel and its associated chambers Scottish Water identified the need to carry out work to refurbish parts of the tunnel and chambers, including installing new valves in the chambers.

In 12 different structures and locations Winn & Coales Steelcoat 100/400 was used to give protection to some 350 linear metres of pipe and various joints and couplings. This follows its successful use last year by George Leslie in a similar refurbishment of Scottish Water's Loch Katrine aqueducts which serve Glasgow.

In each case the Winn & Coales Steelcoat system comprised of: Denso Hi-Tack Primer, Denso Profiling Mastic, Denso Hi-Tack Tape, Denso Ultraseal Tape and Denso Acrylic Topcoat. It was applied by George Leslie's own work force following initial site training on the application methods by Winn & Coales representatives, who also made site visits to monitor application and advise as necessary.

Winn & Coales (Denso) Ltd | Chapel Rd, London SE27 0TR
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e-mail: mail@denso.net. Web: www.denso.net

SKYTEC ARIA - NEW TEST CONFIRMS GLOVE'S EXCEPTIONAL DURABILITY

The Aria glove, from the Globus Skytec range, has achieved top marks for EU standard EN 388:2003, providing added reassurance to customers of their protection from mechanical risk.

The glove, which has a NFT™ nitrile foam palm, recently achieved 25,000 cycles in the EN 388 abrasion resistance test.

The test by an independent research and testing organisation, was carried out to quantify wearer claims that the gloves simply lasted and lasted...far beyond anything they'd ever used before.

This result confirmed Aria as level 4 for abrasion resistance - the maximum that can be achieved in accordance with EN 388:2003. However, unlike standard EN 388 testing, the company continued with the abrasion test to see just how long the glove would last. After 25,000 cycles the machine was shut down, though the glove was still up to the challenge! To put this test result into context, the

minimum number of cycles needed to achieve the highest level (4) abrasion resistance is only 8,000.

Complimented by features such as exceptional breathability and comfort, the additional durability highlights Skytec Aria as a glove that workers are happy to wear for long periods when carrying out a multitude of manual handling tasks, in dry, wet or oily environments - dramatically reducing expensive down time and improving productivity.

Commenting about the result, Steve Shale, Marketing Manager for Globus said, "We know that our customers who currently use Aria have been extremely pleased with the glove's all round performance, as well as the value that it offers. In the abrasion test itself, the machine itself was shut down



after 25,000 cycles, so who knows just how far it could have gone!"

Skytec Aria, the multi-purpose glove with a nitrile foam palm that goes on and on and on.

For more information:

Call: 0161 877 4747

Email: sales@globus.co.uk

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Are Your Engineers Solving Engineering Problems Or Buying Spares?

With engineering skills becoming an increasingly scarce resource it is important that an engineer's time is spent on core tasks.

Unfortunately, too many are still spending valuable time sourcing spares, according to Andy Silver, IS Commercial and Operations Director at ERIKS UK.

Engineering skills are a scarce resource - ask any production or maintenance manager who has been trying to recruit to their team.

However, one of the biggest issues that industry faces is channelling engineering expertise onto engineering issues and problem solving, rather than non-core activities, such as sourcing spare parts for machines or production facilities.

Research suggests that highly paid engineers, whose job it is to keep plants and facilities running, can spend 30-40% of their time sourcing and buying product. In other words, they aren't being engineers. What's more, only 20% of total spend on materials is MRO, yet it takes up to 80% of purchasing time to spend. The reason for this is that the 20% is usually made up of lower value items which are only intermittently required or a distress purchase. At this point, the engineer has to go out to market and source the spares, often making decisions on the basis of comparable prices.

The key question the production or maintenance manager has to answer is, "why are my highly skilled people purchasing spares when they should be solving engineering problems?"

The answer to this question lies in close examination of the indirect supply chain, in particular how and what a company stocks and in what quantities.

The "how do we stock" question is key. Generally, two methods are used, companies either hold stock in stores or go out to market to different suppliers to get multiple quotations.

Often the former is used and is justified on the basis that the line or machine will be up and running quicker if spares are held close to where they will be needed. However, this method is not without its limitations. Our research suggests that, on average 13 minutes are wasted searching for every replacement part in a plant's stores.

The alternative involves going out to market and getting quotes, but as we have already identified, this is not what highly skilled engineers should be doing.

The second question to be answered is, "Are we stocking in the right quantities?" Often stores attempt to hold "one of everything" just in case or, alternatively, multiple spares for critical components. Unfortunately, with cost reduction measures being applied ever more stringently, this method does little to reduce stock or release working capital. The goal must be to reduce stock to minimum levels without impacting production or processing, bearing in mind that 10% of an MRO budget is often spent on unnecessary duplication of parts.

Often this hoarding of parts creates another issue, namely obsolescence. It is not uncommon to find in stores old and out of date spares for drives, pumps and other equipment which no longer have any practical value and are merely taking up valuable space. In fact, our research suggests that circa 10% of storage costs are tied up in obsolete items.

The final question that maintenance managers need to ask themselves is, "Are we stocking the right products?" and this question needs to investigate both type of parts and quantities. Quite often you will find that a store can reduce the units of a stocked part from eight down to four with no impact on downtime or MRO efficiency.

Unfortunately, in MRO, it is extraordinarily difficult to answer these questions because it is impossible to know what is going to break down and when. The forward scheduling of products in MRO is exceptionally difficult, unless there is a refurbishment planned, in which case the engineers know exactly what they want.

This is obviously very different from OEM supply where the engineer knows what he or she is going to need and the components arrive just in time to be scheduled onto the assembly line.



My advice to those engineers who are responsible for MRO spares is to get advice, from experts who know what products to source and how to source them. This advice needs to be much more than just saving on the cost of invoicing. Best advice in this area is application specific and tailored to the company, not an off-the-shelf purchasing or invoicing solution. The expert should be able to spot, for example, that the reason the customer is buying 10 bearings every week for a failing machine is because the bearings are being used in the wrong application.

The truth of the matter is that, whilst the indirect supply chain cannot solve the engineering skills crisis it can at least play its part in ensuring that engineers are spending their time using their core skills.

My own experience suggests that it is possible to give skilled engineers back circa 30% of the time they were spending sourcing products – which is 30% more time solving engineering problems.

For More information please contact:

Andy Silver: andy.silver@eriks.co.uk.

Why steel isn't always safe: How do you protect the environment with plastic? With the new PolySafe Depot from DENIOS

When storing aggressive fluids, steel isn't always suitable. Acids and alkali, for example, have corrosive properties and will attack steel, therefore long term protection is not guaranteed.

So this is where plastic products can be more useful. Plastic offers a high degree of resistance to oils, acids and alkalis as well as other water-polluting, non-flammable substances. And it's much cheaper than stainless steel, which also has a comparable resistance to aggressive fluids.

DENIOS manufactures a wide range of these products in environmentally friendly polyethylene (PE) in its own modern rotational moulding facilities. The plastic is environmentally friendly as it's fully recyclable. Once broken down into granular form, it can be re-manufactured into new PE products.

The new PolySafe depot is another new product from DENIOS in polyethylene (PE). It's manufactured from 100% PE, so it's suitable for the approved storage of water-polluting substances and aggressive chemicals, both indoors and outdoors. PolySafe Depots are available in two sizes, for the storage of up to four 205 litre drums or one 1000 litre IBC.

With a spacious internal height, it's safe and efficient to load with a forklift or pallet truck and integral forklift pockets for access underneath make it easy to relocate. The optional mounting kit can also be used to anchor the PolySafe Depot to the floor. Supplied ready assembled.



For more information on the PolySafe Depot please call free on: 0808 178 07 23, email sales@denios.co.uk or visit www.denios.co.uk

Rittal offer International Service and System Support

Consisting of products, engineering tools and customer support, 'Rittal – The System' is completed with Rittal International Service.

A total of 64 subsidiaries, more than 150 service partners and over 1,000 service technicians guarantee a local service and fast response times.

Rittal International Service now offer tailored service agreements to protect production processes and safeguard productivity that will maintain the value of equipment and systems, minimise downtime and allow costs to be managed over the long-term.

Select from a wide-range of available service packages, including Basic, Comfort, Advanced, Full and Customised. The packages offer various options for availability of Rittal support, response time, spare parts availability, maintenance visits and extended warranty.

Rittal's cooling products situated in harsh industrial environments consistently demonstrate high quality and reliability. Regular preventative maintenance leads to longer product service life for increased equipment profitability. Also available Rittal's warranty extensions between one and three years will provide reassurance for a total warranty period of up to five years.

Simply call, send an e-mail or visit:
<http://www.rittalservice.co.uk/customer-service>
for 24 hour multi-lingual international assistance.



Mykal Make Degreasing Choices Simple For Industry

Mykal have renewed their definitive guide to industrial degreasing with the latest 'Superior Solutions for Industrial Degreasing' Catalogue & Website www.mykal.co.uk.

The catalogue & website cover every aspect of industrial degreasing, ranging from simple maintenance products to sophisticated process cleaning solutions and is targeted at the industrial engineering, manufacturing and maintenance sectors.

The range has been re-structured and includes brand new products such as Contractor's Solvent, Anti-Graffiti Coating, Construction Cleaner & Construction Protector, alongside the top-selling De-Solv-it® and Aquisolv brands.

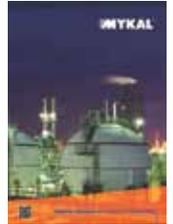
The catalogue & website are at the heart of Mykal's desire to make it easy for users to choose and specify safe degreasing products. In addition many Mykal products come with accreditations from the Defence, Aerospace and Automotive markets.

According to Mykal Marketing Manager, Matthew Dent, the new catalogue & website will make it easier than ever before for customers to choose the correct degreasing product for the job:-

"Industrial degreasing is a daily part of life for many businesses in the UK & Europe. We can offer degreasing solutions ranging from wet wipes to high-spec degreasers to Special Blends for PU and adhesives. This catalogue offers the perfect answer for anyone specifying a new degreasing system or looking to replace hazardous chemicals with safer alternatives."

The catalogue will also appeal to specialist and mainstream distributors by allowing them to respond to common degreasing questions and offers effective and approved products.

To get your copy of the new catalogue, please contact Mykal directly at:-
Tel: 0151 422 1080 | Email: enquiries@mykal.co.uk | Web: www.mykal.co.uk



New Workshop Facility

Promat UK has expanded its High Performance Insulation (HPI) capabilities with the opening of a new specialist production workshop facility on the Wirral.

The HPI premises will allow Promat to continue offering a comprehensive range of bespoke, high performance insulation solutions to a wide range of customers.

The move comes 18 months after the company acquired HPI specialist PMR Precision, and the services previously supplied by PMR will now be provided from the new facility.

Peter Keenan, sales director for High Performance Insulation and Oil & Gas, says: "Our specialist multi-disciplinary team take the complex insulation problems which our customers have, and create highly-engineered bespoke solutions that can accommodate all types of complex size, shape and thermal requirements. We can design, machine or mould microporous rigid panel, flexible panel or block insulation for many types of application such as heaters, batteries, furnaces and temperature control instrumentation. We can provide whatever our customers require, and thanks to our new, larger facilities we can also deliver industry-leading levels of flexibility and responsiveness."

The new HPI Workshop premises add yet another facet to Promat's growing portfolio of fire protection and HPI products. They provide greater scope for the company to offer a wide range of services, including engineering designs, thermal calculations, customised CAD solutions, specialist fabrications, one-off trial samples and bespoke production runs.

"We now have separate engineering design offices, machine shop facilities, a production zone and a finishing zone," adds Keenan. "We also have access to the range of Promat insulation products and solutions which we can source from various Promat facilities around the world."

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Rapid Water Heating at Olympic Venue

Atlantic Boilers have played their part in the success of the £25m Lee Valley White water centre by providing the space heating to warm up competitors and spectators alike!

Built to host events at the Olympics, the venue opened again to the public after the Games as part of the Olympic Legacy Works providing a variety of water sports including White water rafting, canoeing and kayaking. The venue was recently a host of the ICF Canoe Slalom World Cup.



Lee Valley Regional Park Authority chose two Atlantic Multi-Elec Compacte 36kW electric boilers. In a remote location, these reliable, easily serviceable boilers were ideal. Also, flues were not required to puncture the streamline-shape of the roof and spectator terrace of the Facility Building which is a winner of the RIBA East Spirit of Ingenuity Award. In addition, standing losses are less than one third of one per cent of the fuel bill.

The new facility building houses reception, café, changing rooms, shop, offices, spectator viewing, equipment storage and water pump and filtration facilities and in 2014 the facilities have been improved further including more changing rooms, an expanded café with a bigger outdoor terrace area and the new Pavilion in the park which includes the Finish Line Café.

For more information see www.atlanticboilers.com
email: info@atlanticboilers.com | Tel: 0161 621 5960

New SEAT S50: Powerful Protection from Hazardous Fumes

Powerful, energy saving and quiet, it's hard to ask for more from a fume extraction fan but the new SEAT S50 has all those attributes and more.

Designed for exhausting fumes from hazardous manufacturing processes, the S50 is the latest addition to SEAT's S Series and can support perilous processes such as PCB manufacturing, component washing and etching.



Fitted with a backward curved impeller, the S50 can produce a high pressure but with low noise and impressive efficiency. The fan's polypropylene construction makes it ideal for use in highly corrosive environments and chemical industry applications, safeguarding workers from potentially harmful gases. End users that require an externally fitted system can rest in the comfort that the UV treated polypropylene will be protected from the erratic British sunshine.

Supplied with an inverter as standard, users can also benefit from enhanced speed control and an easy stop/start function, importantly this also allows for energy savings as the user can set the system to perform in line with their actual ventilation needs.

Axair Fans, based in Staffordshire, are the exclusive UK distributor for the S50; available now on a short lead time. For more information contact one of their engineers today.

Axair Fans UK Ltd | 01782 349430 | www.axair-fans.co.uk

NEW THERMOGRAPHY COURSES CONFIRMED

Thermal imaging has become an essential method of detecting faults and averting failure in electro-mechanical systems.

It's also ideal for identifying the source of energy loss and spotting problems in the fabric of a building.

Vital to its effectiveness however is the user's understanding of the science behind the technology.

It is to provide those interested in deepening their knowledge of the subject that technology leader, FLIR Systems, has announced more Level 1 Thermography courses throughout the UK via its ITC Training Centre and approved partners.

ITC training is recognised for funding through the Department of Works & Pensions making courses accessible to anyone wishing to incorporate thermal imaging into their work routine.

The ITC five-day Level 1 courses are confirmed as follows:-

8th – 12th September - Cardiff

15th – 19th September - Maynooth, Ireland

6th – 10th October - Aberdeen

20th – 24th October - Manchester

10th – 14th November - Nottingham



8th – 12th December - Kent

For further information on the venue, course

syllabus and availability visit:

www.irtraining.eu

Raising A Glass To Energy Efficient Boiler Installation

The energy-intensive process of creating one of Scotland's finest malt whiskies is being made more efficient thanks to the installation of a new Wellman boiler system.



The famous Tomintoul distillery, in Speyside, contracted the West Midlands-based industrial steam boiler specialist to provide a new system with integrated economiser technology.

The 11,000kg/h High Efficiency Steam boiler is allowing the distillery to reap the benefits of a new gas main which was recently installed on site.

Doug Howarth, National Sales Manager at Wellman Thermal Services, part of the Wellman Group, said: "The Tomintoul installation is the latest of high profile project we've completed in Scotland for whisky makers.

"Distilleries require very high quality boiler and burner packages, and we were able not only to offer this

but also able to comply with the fast fulfilment of the order as the client had very tight delivery requirements.

"Previously the distillery operated on an oil fired boiler, and with oil prices consistently much higher than gas, this has seen energy running costs at Tomintoul increase steadily.

"There has been a multi-million pound investment in getting gas to the distillery site which will see a return on investment within four years, and the installation of the new boiler system will also help cut back on the energy costs of the distillery process.

"The system we have provided includes a Saacke burner, one of the world's most efficient burners and

one which we have also supplied to other Scottish distilleries."

There are around 100 active distilleries in Scotland, most of which have relied on oil to generate heat for distilling processes, which can be expensive and emission intensive.

Tomintoul is benefitting from the Speyside Gas Pipeline project, part of the whisky industry's collaborative work to reduce greenhouse gas emissions. The project has allowed four locations to replace their fuel supply with a lower carbon intensive alternative, achieving a reduction in CO2 emissions of over 10, 893 tonnes a year.

Other Wellman installations have been completed at Speyburn Distillery, Craigellachie Distillery, Tamnavulin Distillery. There is also a Wellman boiler at Chivas Bros, which was one of the founding companies of the Speyside project with Tomintoul and Diageo, following an approach from Angus Dundee which came up with the idea for the pipeline.

The conversion from oil to gas has allowed economisers to be installed on boilers which use hot exhaust gases to pre-heat the feed water entering the boiler to save energy.

All of the Wellman distillery installations will now also benefit from the opening of a new Wellman support centre to provide on site training, after care and servicing across Scotland. The dedicated team, based in Paisley, near Glasgow, was set up at the start of 2014.

For further information about Wellman, please visit www.wellman-group.com or call 0121 543 0000

Integrated Hydraulic Control Blocks Bring Concentrated Benefits

Bespoke control blocks offer many advantages over conventional pipework solutions across a wide spectrum of hydraulic installations, including leak-free operation, robustness and compact size.

Gerhard Ruppel, founder and managing director of Gerhard Ruppel Hydraulik in Bad Münden explains the key elements of this design discipline.

Hydraulic circuits work by using valves that open and close to direct the fluid to the required part of the system. Traditionally the valves are positioned around the circuit at points where the fluid flow needs to be controlled.

An alternative approach that is increasingly being favoured is to group all (or at least most) of the valves together in one place on a single block. The pipework that makes up the circuit has to be routed through the block, which may seem complicated, but this is more than compensated by the many other benefits that accrue.

While the control block approach is not suitable for all hydraulic installations, it is for a wide range of applications from presses, through construction machinery to deep-sea drilling rigs.

The block concept enjoys clear advantages over the more conventional method where each hydraulic

control element is piped individually. A block has a small footprint, and the risk of leaks is low. The screw-in valve technology is easy to maintain, and both standard valves and tailored valve solutions can be used. Energy and flow optimised systems can be incorporated during the block development stage and, last but not least, a block with screw-in valves simply looks better than a traditional hydraulic control with its multitude of pipes and connectors.

In this demanding domain of hydraulic and electrohydraulic engineering, experience counts for a great deal. When designers develop a control block of this type, their work revolves around the specific requirements profile of the application in question. And once a project is completed the details of each design are carefully filed away, because while the design is bespoke to a particular application, it contains elements that may be useful in later jobs. As the library of past jobs grows, so does its value to the design team, who may be able to produce a new solution tailored to a new requirement very quickly by re-using pre-existing partial solutions.

Applications

The field of mobile hydraulics has already adopted the concept of control blocks with enthusiasm. This is due in part to the fact that mobile applications often impose special requirements in terms of space restraints, ensuring power density and long service life under unfavourable environmental conditions (vibrations, fluctuations in temperature, corrosive media, etc.). Another significant advantage is that the installation time for the hydraulics is dramatically reduced.

A typical project for mobile plant may involve the



Figure 2: When it comes to selecting its screw-in valves, Ruppel Hydraulik has an unusually wide range at its disposal, so that special requirements can also be implemented in practical applications.

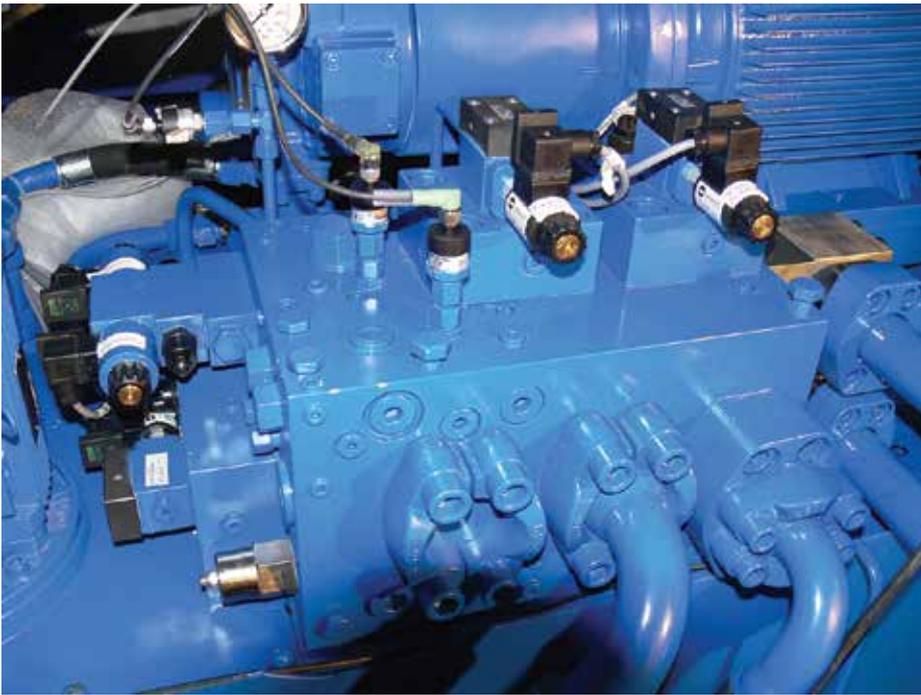
design of a control block with more than 50 valves for the control console of an item of construction machinery (Figure 1). Pipework design for a control console of this size would be considerable and its installation would require around two person-weeks for completion. In contrast, a block solution would produce a compact control desk - considerably less than a metre long - which could be connected up by one fitter within a single day. The manufacturer is thus able to reduce the lead time for assembly of the machine as well as save on costs.

Cement mill innovation

When developing a new type of cement mill, the designers were faced with the task of implementing a hydraulic safety system. If a very large piece of rock has to be processed, the gap in the crushing



Figure 1 : A block design can significantly reduce installation times for hydraulic control systems - in this case from two weeks to a single day.



gear has to be enlarged in a very small space of time. This is the only way to prevent the rock material damaging the crushing rollers and/or their drive.

Using conventional pressure limiting valves as shock valves does not work, as they will not react quickly enough. Instead a control block was developed incorporating a pressure limiting valve from the Sun Hydraulics range which has a particularly fast reaction time (Figure 2). Thanks to this valve, the adjustment drive is able to react very quickly. Within 300 msec, the system flow increases from 100 l/min to 1000 l/min without any pressure spikes.

All the functions required by the machine manufacturer have been incorporated in a compact, application-specific block which is also reliable under the harsh environmental conditions prevailing in the production of cement (Figure 3). The hydraulics are therefore instrumental in achieving practical implementation of an innovative, highly energy-saving concept in the production of building materials.

Integration press hydraulics

A Russian press manufacturer originally used a hydraulic controller of piped design to provide synchronous control of the two big cylinders on a series of hydraulic presses. In a redesign project, a block was developed incorporating three NG25

Figure 3: Even under challenging conditions, e.g. in cement production, control blocks work reliably, requiring a minimum of maintenance.

directional control valves and four NG10 valves, as well as other components. The block uses both proportional and on/off control valves, as appropriate for each task.

With the new hydraulic system pressure build-up to initiate press movement is very rapid, despite the massive volumes of hydraulic oil moving round the system. The block also manages pre-charging and



Figure 4: Subsea hydraulics: this block controls the drilling unit of a research ship which takes samples at depths of 2,500 metres.

pressure sequencing. The new block is a lot more compact than the solution it replaces, there are no leaks, and the system is reliable with very little need for maintenance.

Going deep

Particularly high requirements were presented by a project where a German research ship had been equipped with a hydraulic drilling unit designed for drilling the seabed at a depth of 2,500 metres. The first challenge was to ensure compensation of the external pressure of around 250 bar and reliable separation of the hydraulic circuit from other media such as drilling fluid and sea water.

The electrical signals generated at the control desk on the ship are converted by the hydraulic block (Figure 4) into movement at a depth of 2.5 km.

Here too, both on/off and proportional valves are employed, and pressure regulation is used to adapt the hydraulic circuit to the requirements in question.

Summary

As well as extensive knowledge of and experience in control technology and applications engineering, flexible production options are needed if customer-specific control blocks of this type are to be developed and manufactured economically. In-house manufacture of the blocks is important in ensuring short lead times, both in larger production runs and on single batches.

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BCAS Launches FREE Associate Membership Offer For End Users

From 1st July 2014, the British Compressed Air Society (BCAS) is offering customers of current BCAS members 12 months' free associate membership – worth £975.



compressed air and vacuum industry. Put simply, it can help companies perform better and raise their profile. It also enables companies to get involved with the industry's engineering and technology community, from networking to contributing to government consultations and submissions.

"We have created a portfolio of membership benefits, which are designed to provide the knowledge, tools and advice to help companies be more productive, competitive and ultimately more profitable."

About BCAS

BCAS is the only UK technical trade association representing manufacturers, distributors and users of compressors, vacuum pumps, pneumatic tools and allied products.

The society actively represents the interests of the compressed air industry to the UK government as well as to many European and other overseas institutions. The society and its members have an active input into all proposed UK and European compressed air systems' energy and environmental legislation and standards through its membership of the European body PNEUROPE, and by its association with the prime voice of the EU engineering industry, ORGALIME.

The society's mission is to be the recognised authority, providing unbiased advice on legislation, technical standards, education, compliance, safety and environmental matters that affect suppliers and users of compressed air and vacuum systems.



The offer will provide UK companies with a whole host of BCAS membership benefits including discounts on training and publications, as well as access to compressed air guidelines and the society's social events.

Launched under the brand 'AIRSAFE', which is part of the society's 'Insist on BCAS – Be Compliant And Safe' scheme, the offer aims to make processes that use compressed air compliant, safe, more efficient and ultimately more cost effective.

The free membership will be backdated to 1st July

2014 and will last for 12 months in total.

Commenting on the launch of the offer, Chris Dee, BCAS executive director said:

"For those who use compressed air, there are many benefits to be gained by becoming a member of the British Compressed Air Society.

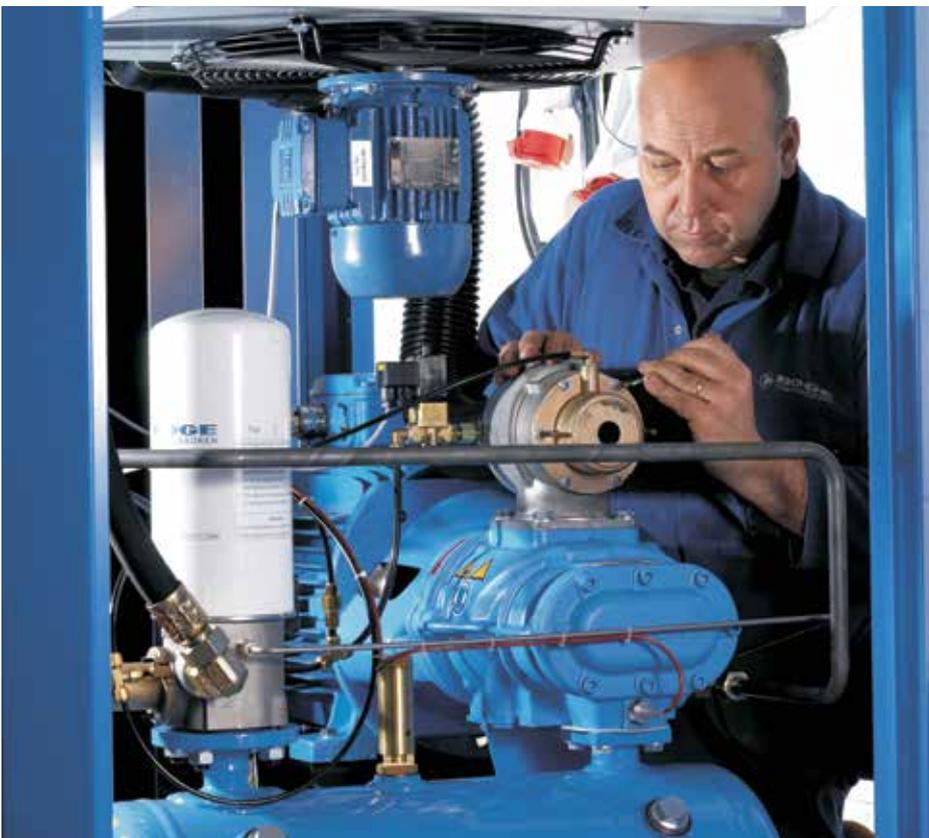
"BCAS membership gives access to a comprehensive range of products and support services including training, which have been developed specifically to meet the needs of the

For further information on the free associate membership offer, please visit www.bcasairsafe.co.uk or contact Chris Dee, BCAS executive director, stating your company name and full contact details, along with the name of the supplier of your compressed air products and / or services:

Email: chris@bcas.org.uk
Tel: 020 7935 2464.

BOGE Provides Energy Efficiency Audits In Line With ISO 11011 Standard

BOGE Compressors Limited has adopted ISO 11011 Standard for all Compressed Air Energy Efficiency Assessments.



BOGE's commitment to complying with this new standard will provide comprehensive and detailed energy audits, enabling compressed air users to optimise their energy usage and identify actions that can reduce costs.

Compressed air users will benefit significantly from the introduction of the ISO 11011 standard as it sets in place guidelines for companies to conduct industry-wide like for like energy efficiency audits. Energy audits establish the volume of compressed air that a company uses and how

much it costs to generate. The audit results then enable businesses to look at the procedures that are available for reducing carbon emissions and waste in their manufacturing process, while improving environmental impact.

BOGE is committed to all aspects of waste reduction and energy efficiency and aims to support end users by providing comprehensive and regular energy audits in line with ISO 11011. The compressed air specialist evaluates all areas in the compressed air generation and treatment process

to detect any present defects and recommends carrying out a number of important tests, including a consumption test, vibration control test, leakage test, sound test and an oil check.

Mark Whitmore, General Manager, BOGE Compressors UK, said, "We are delighted that Compressed Air Energy Auditing now has an ISO standard. As a company that strives for optimum performance and energy efficiency we are pleased that there is now a set of guidelines for the whole industry to commit to."

The globally accepted ISO 11011 is designed to create a framework for the compressed air system energy efficiency assessment and auditing process. Previously, there has not been a framework or a formal standard, resulting in an absence of accurate information about the performance of compressed air applications in the engineering industry.

The new standard assesses compressed air use, critical production functions and poor system performance, which helps to identify and quantify energy waste, the difference between compressed air supply and demand, energy use and total compressed air demand.

BOGE has released a free white paper for the purpose of raising awareness about the importance of energy efficiency when using compressed air and the services that are available to reduce waste and costs.

To download the white paper, please Visit:
www.boge.co.uk/artikel/download/BOGE_-_ISO_-_White_Paper_-_April_2014.pdf

For further information please visit:
www.boge.com/uk

New Dryers From Hi-Line Designed For High Performance & Long Life

A new range of point-of-use adsorption dryers called the Atacama range has been introduced by Hi-line Industries Ltd, the compressed air specialists.

These new products replace their previous Hi-Zorb range, and have positively driven valves fitted throughout rather than the less reliable shuttle valves previously utilised. Good performance combined with high reliability has been achieved following the elimination of valve failure, leading to extended periods between routine services. The Atacama products, which are fitted as standard with both pre and post filtration facilities, provide dry air at a dewpoint of -40°C . Lower dewpoint models down to -70°C can also be supplied. They are suitable for applications in the medical, dental, food processing and packaging industries as well as powder coating, printing, laser technology, plasma cutting, pneumatic control and general manufacturing.

Well proven extruded aluminium technology is utilised for the twin desiccant filled towers comprising each dryer, each tower being sealed with aluminium valve blocks at the top. Incoming air is being dried as it passes through one desiccant bed while the adjoining dryer chamber is automatically being regenerated using the PSA (Pressure Swing Adsorption) principle. While

operating, a small amount of the dried compressed air is used to regenerate the adjacent saturated desiccant bed. This is achieved by the expansion of the introduced air from line pressure to atmospheric pressure, so removing entrapped moisture within the desiccant and thus regenerating the dryer ready for the next change-over cycle. This change-over is instigated automatically, controlled by a digital controller.

This energy-saving system can be further upgraded where required by the introduction of a dewpoint hydrometer probe to provide automatic full dewpoint control. A dewpoint LED display is incorporated in the top right hand corner of the control panel. This smart controller feature can also be retro-fitted to all makes of dryer as an energy saving feature.

A total of 8 of these small, compact dryer models are available off-the-shelf for next day delivery. These cover air flow rates from 5 up to 100cfm, operating at a pressure range of 4 – 16 bar from a standard 240Vac supply.

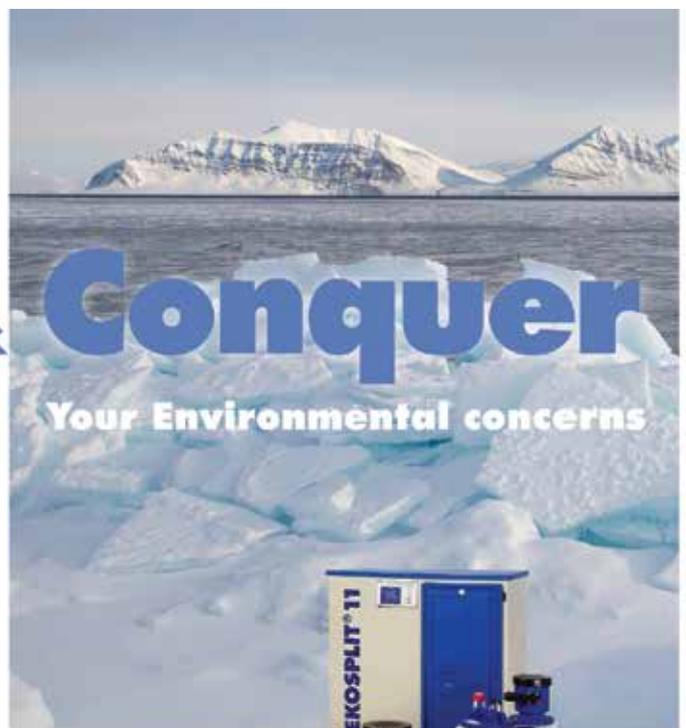


Further information is available from:
Hi-line Industries Ltd, 5 Crown Industrial Estate,
Oxford Street, Burton on Trent, Staffordshire
DE14 3PG
Telephone: 01283 533377 | Fax: 01283 533367
E-mail: enquiries@hilineindustries.com
www.hilineindustries.com



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Gardner Denver Finds The UK's Oldest Compressors

The results have been counted and the winners are in!

Gardner Denver's quest to find the oldest working CompAir and Hydrovane compressors has been a resounding success with entries received from across the UK, and the company is proud to announce the two winning entries.



1936 CompAir

The 1936 CompAir compressor is in daily operation in a research facility at a University in the North of England.

Entered on behalf of the customer by Gardner Denver distributor, Chris Hall from Air Compressors and Blowers North (ACB), the machine, which is located in an old World War Two bunker, is still serviced regularly by ACB and in fact, has just passed its annual maintenance inspection with flying colours.

As well as being a veteran of the compressed air world, the machine is also a seasoned traveller, having been stationed at a U boat service yard in Germany after World War Two before making the trip across the channel to be donated to a professor at the University in 1967, when the research facility first opened.

The machine still has all its original starters, which are filled with oil and, although this type of starter is no longer in use, it has been preserved on this machine.

Commenting on the success of the campaign, Colin Mander, Regional Director at Gardner Denver said, "Our compressors have always been built to last, but even we have been 'blown away' by the age of some of the machines entered, which are still in perfect working order.

"It really is testament to the UK's great engineering



heritage that these machines are still going strong after all these years; but it is also because the compressors have been serviced regularly, by factory-trained engineers, using genuine parts and the right maintenance techniques.

"It's that combination of quality engineering and regular servicing by an accredited agent, which remains as important today for our brand new machines as it was seventy years ago.

"We had many more fascinating entries and, although we could only have two winners, it would be a shame not to mention some of the other highlights. These include a Series 3 Landrover-based vane compressor driven by the vehicle's engine dating from the late 1970s and four CompAir Reavell BC6 compressors, each over fifty years old that are still working and supplying the production process for one of the oldest companies in Ipswich.

"Gardner Denver would like to thank everyone who entered and, although the competition is now closed, would still like to encourage other companies to send in their oldest compressor stories and pictures, which we will share on Twitter and other online channels."

Flying the flag for the reliability and durability of CompAir compressors is a 1936 CompAir Broomwade machine, which has clocked up an incredible 78 years of service and an equally amazing history. Slightly younger, but 'fighting fit' in its fifties is a 1963 Hydrovane compressor.

1963 Hydrovane

Entered for the customer by Gardner Denver distributor, Richard Coar from Airvane Compressors, the 51-year old Hydrovane unit is in daily operation at the University of Manchester, a site that has been at the forefront of engineering since it opened.

Pioneering the development of the world's first computer and achieving numerous firsts in both the space and aerospace industries, the research centre has 25 Nobel laureates among its present and past research fellows and was recently awarded a Nobel prize for engineering for the development of graphine.

The compressor is one of approximately 70 other Hydrovane compressors that are in use across the university, all of which are serviced and maintained regularly by Airvane Compressors.

For further details please contact:
sales@compair.com
01527 838603

Open End To Atmosphere

At the recent Air-Tech exhibition at the N.E.C Birmingham, BEKO TECHNOLOGIES gave a presentation in the seminar area entitled “open end to atmosphere”.



This presentation was an advice about the issues of having an air supply at say 7 bar (g) venting down to atmosphere without doing any useful work or work that cannot be done more economically or safely by another medium. An example of this would be the use of blow guns to clean machinery down at the end of a production period i.e. could be three times per day. This practice was widespread and was wasteful in that the dirt/dust would resettle, the pressure was not often regulated and it is a potentially dangerous practice particularly if the operative has an open sore then compressed air can be potentially lethal. There is a simple answer, use a vacuum attachment to the airline or a “venturi” assisted type which increases the flow at reduced pressure.

The opportunities for saving were broken down into 3 key areas. The first was leaks and it is well known that leaks from a compressed air system can be quite considerable. In fact a system with 10 % leakage is regarded as a good one. Bearing in mind that 10% of all power used in modern industrialised societies will be to compress air then

we are wasting 1% of all power even when we are good at housekeeping so it is clearly important that we make sure that the wastage is not significantly higher than this.

What causes leaks in a compressed air system?

There are many opportunities for the compressed air network to develop leaks but the principle ones would be:-

- Corrosive condensate. The particulate material drawn into a compressor together with the small amount of oil carried over will become an acidic liquid when the compressed air cools and water vapour condenses out and mixes.
- Poor installation. Pipe supports not adequately designed causing stress on joints which become leaks. Cheap solutions such as hoses for temporary solutions which become permanent
- Impacts such as fork lift truck
- Poor maintenance. The maintenance engineer has to see the compressed air network as a part of his maintenance routine rather than a one-off occasional exercise to cull leaks.

Also some machinery will be stopped at a point where a valve or orifice is open and will remain open until the machinery restarts. These may be small occurrences but the sum total of all these small leaks is normally in excess of 10% and for example a 75KW compressor running on load for a year will cost more than £70,000.

So it is important to check leaks via an ultrasonic device, mark up the leaks in some kind of classification as to the severity of the problem then fix the worst ones. It is then important to realise that this is not “job done”. The leaks will in some cases come back because of poor installation or appear elsewhere as the corrosive condensate or an impact creates a new leakage.

The second area is condensate draining and it is important to understand that the condensate has to be drained efficiently or can be re-entrained and cause moisture problems and as just indicated will create leaks in the distribution system. There are not too many old fashioned steam type traps used anymore because they were subject to blocking through debris falling onto the valve seat and also to hydraulic locking requiring the installation of a balance pipe. Solenoid drains became popular and are still widely used but are inefficient because of the number of variables involved such as compressed air flow, pressure, temperature and relative humidity. All of these combine to ensure that the condensate volumes are different from day to day, morning to evening, winter to summer, UK to China. To be sure to get rid of the condensate then the blow down time will be set for the worst case which will mean considerable wastage on every occasion that does not equate to this set time. The solution to this is the zero loss drain which is becoming the product of choice because there are no losses of the expensive





resource of compressed air. There is an investment cost but in nearly all cases the return on investment can be shown as being acceptable. There may be as many as 100 drain points in a large plant with outdoor piping so it is a simple but important area to consider for the maintenance routine.

A customer in the Midlands recently asked BEKO TECHNOLOGIES to attend site because of a perceived drying problem. This problem existed and was being dealt with but as part of the routine checks the air receiver drain was checked. With no exaggeration 15 minutes was required to drain the large air storage vessel. If the condensate level had become much higher then serious amounts of the contaminated condensate would have been re-entrained into their system. The company are involved in an industry where it is vital to be "just

in time" and deliver direct to production lines. It is easy to imagine the large scale problems for this company and its customers if a large scale ingress of condensate had occurred. The installation of an efficient level sensing BEKOMAT solves a potentially disastrous situation at a small investment cost.

The other area where compressed air is wasted is in the drying process. There are many processes which require a dew point below the -3°C which refrigeration dryers are capable of reaching. This could be for instrument air, for pneumatic conveying, food, beverage or medical grade compressed air to name a few processes. The lower dew point typically -40°C is achieved by use of a desiccant material which is unchanged by the process of attracting water vapour via molecular forces but will need to be regenerated in order to be used over multiple drying/regenerating cycles.

One of the regeneration methods is heatless or cold regeneration which requires a part of the dried compressed air to be expanded to become super dry and then flowed through the wet desiccant bed. Nature does not like large gradients and the difference between the water content of the desiccant and the regeneration air will create the migration across to the compressed air which is then vented to atmosphere. In this method 15% of the compressed air is used solely for drying which if we equate back to our 75 KW compressor would mean a cost of £10,000 or more. The reason this genre of dryer was popular was because of low price and simplicity but it is clear that for systems above the 75KW level other methods should be applied.

Zero Purge dryers are becoming the norm for larger installations. They use external heat to regenerate the desiccant and blown external air to cool meaning that the costs are kept to a sensible level for the drying process. An example given at Air-Tech was of a company in the automotive industry who had a part purge drying system so lost a smaller notionally 5% of the compressed air but had heating costs and cooling costs. The offer of a zero purge system showed a payback of less than 2 years for the purchase, installation and commissioning of 4 large BEKO FRAV dryers. Ongoing annual savings of more than £250,000 where attractive but another important customer benefit was that they could abandon their plans to add another large compressor into their network. This would have been very costly because alongside the capital and running costs there would have to have been a large investment in creating a space suitable for a large compressor to add to their very large system. Users of oil free compressor should also consider the use of "Heat of Compression" types of dryer which take advantage of the higher temperatures generated in a dry compressor as opposed to an oil lubricated type, to use the heat for regeneration of a desiccant.

The message is clear and simple. Compressed air is the 4th utility but it is expensive and should be used selectively. When looking at energy saving possibilities the factory engineer should be serious looking and thinking..."Have I got these open ends to atmosphere?" If the answer is yes then an action plan to reduce or eliminate should be high on his agenda!

BEKO Technologies Limited
Tel: 01527 575778
E-mail: info@beko-technologies.co.uk
Website: www.beko-technologies.co.uk

An Efficient Calibration Process Is Automated And Paperless

Every plant has a process on site for performing and managing calibrations, but there can be many different types of calibration processes and they vary in terms of quality, efficiency and productiveness.



The calibration process starts from the planning and scheduling of the calibration work and includes performing of calibrations as well as documentation of results. An efficient calibration process saves time, automates procedures, is cost-efficient and assures

that the results are reliable. The best-in-class calibration processes are integrated, automated and paperless. This is the key message in Beamex's global "Calibrations under Control" marketing campaign. Jan-Henrik Svensson, VP Marketing &

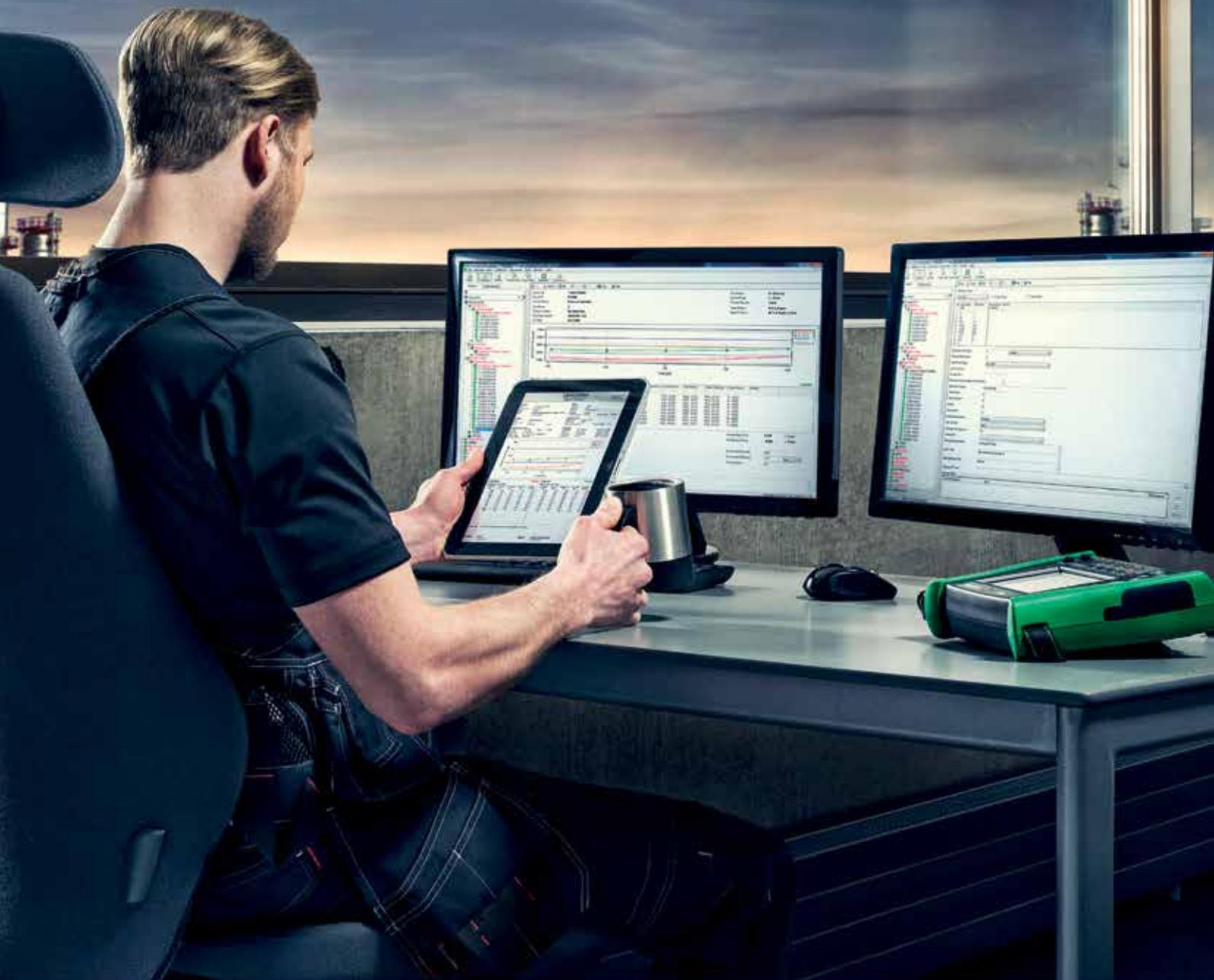
Sales of Beamex Group explains, "We are not just offering a product or even a set of products and services – what we are actually offering is a new process of performing and managing calibrations in a way that provides efficiency and quality improvements as well as cost-savings".

Beamex ICS, the integrated calibration solution, which constitutes the heart of this marketing campaign, is unique compared to any other calibration system due to its seamless communication between calibrators and calibration software, the possibility to integrate it into a maintenance management system (ERP/CMMS), the multifunctional calibrators that can perform automated calibrations fast and efficiently as well as the calibration software that allows smart analysis and management of all calibration data.

The microsite beamex.com/calibrationsundercontrol explains the benefits of an automated and paperless calibration process as well as includes an online test for testing the efficiency of a plant's current calibration process.

BEAMEX is a leading, worldwide provider of calibration solutions that meet even the most demanding requirements of process instrumentation. For more information, visit www.beamex.com.

Calibrations under control



Beamex provides the equipment, software and services needed for an efficient calibration process. The calibration process starts from the planning and scheduling of the calibration work and includes performing of calibrations as well as documentation of results. An efficient calibration process saves time, automates procedures, is cost-efficient and assures that the results are reliable. The best-in-class calibration processes are integrated, automated and paperless. Learn more and test how advanced and efficient your existing calibration process is at: www.beamex.com/calibrationsundercontrol

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info@beamex.com

AMETEK Land introduces NEW Cyclops L - portable non-contact thermometers

AMETEK Land, a leader in non-contact temperature measurement, combustion efficiency and environmental emissions monitoring, has launched the latest update to its Cyclops™ family of portable, high-precision, non-contact thermometers – the Cyclops L.

With its internal data logging capabilities, configurable route modes and dedicated software, the Cyclops L further establishes AMETEK Land as the industry leader in high-quality, portable non-contact temperature measurement.

Four New Models

There are four new models in the new Cyclops L family, measuring across the range 200°C/392°F to 3000°C/5432°F. They are aimed at a wide range of applications including liquid metal, steel and glass production, furnaces, plus many others.

Route Manager Function

The Cyclops L family features the new Route Manager function, which enables users to configure a path/route around a plant by identifying the location with description, an emissivity value, a window correction factor (if applicable), and a unique identifier (a description). This Route

Management mode allows for complete repeatability of readings, making the thermometer the ideal tool for multiple locations requiring regular and reliable monitoring.

High Capacity Internal Data Logging

The Cyclops L thermometer stores up to 9,999 temperature measurements, which can be downloaded to optional logger software for further analysis and comparison.

New Dedicated Data Logging Software - on a mobile device

The Land Cyclops Logger Software allows users to connect a Land Cyclops portable thermometer to a personal computer or mobile device to view, analyze and record live temperature readings. Connections between the Cyclops L model thermometers and a mobile device /computer can be either wireless (via Bluetooth®) or via a USB cable.

Models Available for a wide range of applications

These reliable, high-accuracy battery-powered thermometers have application in a wide range of industries, including metal foundries, steel making, glass refractories, petrochemical processing, and laboratory/research & development. They have precise, narrow field of view continuously focusable optics with through-the-lens sighting for accurate sample point selection. Long-term, drift-free measurement assures confidence in the readings.



Outstanding Damage Protection

The new Cyclops thermometers benefit from a new industrial rubber casing cover, for increased protection from accidental damage. Plus a new lens hood that adds further protection.

Full UKAS Calibration Available

Cyclops L thermometers can be certified by US and UK ISO 17025 accredited laboratories to recognized international standards, in both the UK and USA.

AMETEK Land (Land Instruments International)
<http://www.landinst.com>

New Fluke Preventive Maintenance Portal Provides Expert Guidance On Maximising Plant Uptime

Fluke has developed a new Preventive Maintenance portal on its UK web site to provide expert guidance to industrial maintenance engineers and technicians on how to maximise plant uptime and minimise downtime.

Just one of a series of 'Solution Centers' which contain a library of information and programs, the content will be frequently updated with new information, so users are advised to add www.fluke.co.uk/Maximize-uptime to their favourites list.

The Fluke Preventive Maintenance portal provides advice on constant condition monitoring in order to maximise component life, track equipment wear trends and reduce downtime by identifying problems before they occur. There are examples of how Fluke tools, from precision analysers to troubleshooters,

loggers and recorders, can help cut plant energy costs and minimise downtime and production stops.

A short video looks at the application of LaserSharp® Auto Focus thermal cameras and vibration meters to check the status of motors; the applications of visual infrared (IR) thermometers are explained with the use of a downloadable Application Note; the use of a Fluke 435 Power Quality and Energy Analyser along with other tools to reduce energy consumption is explained in Application Notes and Video Testimonials; and another section provides full guidance on the ideal



tools and how to use them to detect and analyse problems with electric motors and drives.

The Preventive Maintenance portal also refers maintenance professionals to the relevant Fluke Academy series of seminars that run throughout the year in various locations across the UK and Ireland.

Further industrial maintenance guidance can be found through the Plant Maintenance portal. More information about all Fluke tools can be found at www.fluke.co.uk

Worldwide MSX Demand Fuels Cost Reduction

The patented multi-spectral imaging (MSX) capability of the FLIR E-Series has proved significant both to customers worldwide and to FLIR Systems' pricing.



This feature is standard on the entire FLIR E-Series of electro-mechanical troubleshooting cameras and it is now one of the main reasons why customers choose this brand.

Indeed, MSX has resulted in huge demand for the FLIR E-Series in general and the FLIR E8

in particular and this, in turn, has enabled FLIR Systems to make this model even more attractive from a price perspective.

Based on current economies of scale and therefore valid until 30th September 2014, the FLIR E8 now carries a price tag of just £3,035 (3,995 euros in Ireland). This represents a cost saving of around 37% on the original manufacturer's recommended price.

MSX has proved so popular because it provides exceptional image quality in real time. It extracts the outline detail from the visual image and blends it with the thermal profile. This makes it so much easier for the camera user to diagnose the problem.

Its effect is particularly striking on the high resolution, 320 x 240 pixels, images produced on the FLIR E8. Such is the clarity of the MSX enhanced image that a supporting visual image isn't needed. MSX can also be applied to stored visual and thermal JPEG images after inspection.

For further details on the FLIR E-Series and its unique MSX technology go to: www.flir.com

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The Flange Protection Challenge

The integrity of flanged connections is critical to the containment of fluids in a piping system.

Loss of containment, whether in chemical lines such as hydrocarbons and gas systems or water distribution lines, will have significant environmental, operational and commercial impact, and could pose a serious safety risk. Flanges present a unique corrosion protection challenge because solutions must not only prevent corrosion, but also allow future access to fastenings in the event that maintenance or disassembly is required.

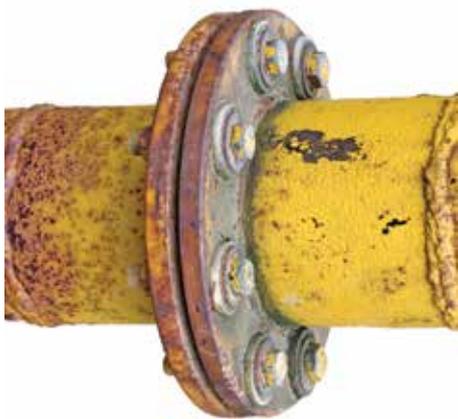


Figure 1. Flange corroded

Corrosion issues and inspection of flanges

As flanged connections are a critical component within the piping system, effective monitoring and inspection techniques are required to minimise unscheduled shutdowns due to leakage in order to meet ever demanding production requirements. Usually, leakages occurring between the flange faces are the primary concern, leaving fastenings and pipe external protection unaddressed, which can lead to serious problems especially when external environmental conditions are severe.

Insufficient external protection can lead to rapid and more extensive damage to the flanges and fastenings which will in turn accelerate the deterioration of the sealing system as a whole.

Depending upon the severity of the environmental conditions there may, at best, be a slow continuous degradation of the substrate, however, under extreme conditions, the external corrosion process may rapidly reach a point where the structural integrity of the system is adversely affected and could result in a catastrophic loss of containment.

Since visual inspection of the sealing faces of flanged connections can only be accomplished during a shutdown of the system, it is vital that this process is made as simple as possible and therefore elimination of external corrosion must be a high priority. If shut down is not an option, then an alternative method of inspection would be to use ultrasonic techniques but again this process can be made much more complex and inaccurate if external corrosion is not controlled.

Therefore, external corrosion protection of flanges and fastenings is critical in order to be able to both monitor the system and provide more effective and realistic quality control and inspection procedures.

Existing solutions to answer the corrosion protection dilemma of flanges

Due to the complexity of the flange geometry, it has become a challenge to design efficient solutions to protect flanges against corrosion. The ideal solution would be a system that combines excellent corrosion protection along with a simple installation procedure and is suitable for all flange sizes and shapes, in conjunction with easy bolt access for inspection purposes.

Common solutions available on the market like conventional paints, clamps and covers, solid or semi-solids tapes and polymer bags are widely used but none have proved to be an infallible solution.

New solutions like hot-melt thermoplastics offer an interesting and cost-effective alternative, as the material can be re-melted and recycled after removing it to access the flange; however, it requires hot work as well as specialist equipment.

Peelable coating for flange corrosion protection

To offer an alternative answer to flange corrosion issues, Belzona has formulated a new peelable coating concept, Belzona 3411 (Encapsulating Membrane), specifically designed for the protection of flanges, fastenings and associated pipework. Belzona's R&D Chemist, Ruckseeta Patel, has stated that "with the use of clever polymer chemistry, we have created a flange protection system strong and flexible enough to be peeled back without tearing. This solution features the flexibility of elastomers but is based on a completely new technology excluding the use of isocyanates and toxic metal catalysts. The system bonds to manually prepared surfaces and does not involve hot work, making it safe and easy to use."

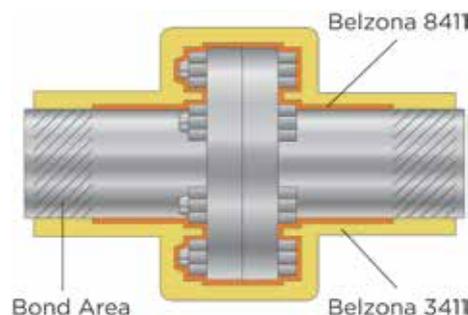


Figure 2. Belzona flange encapsulation system

This system can be used to protect any flange shape, size or configuration from corrosion and completely encapsulates the flange to exclude any moisture and can be hand applied at temperatures between 15°C-60°C. When maintenance is required, the system can be cut open around the circumference between the flange faces using a sharp knife. Once the required maintenance has been completed, the system will fold back to its

original position where it can be simply re-sealed by application of a further layer of Belzona 3411 over the cut area thereby maintaining corrosion protection of the flange and fastenings.

Belzona 3411 exhibits excellent corrosion protection, UV and heat resistance up to 60°C, demonstrates a good fire resistance and has a low hazards class. Excellent adhesion properties onto manually prepared surfaces such as ISO 8501-1 St2 or SSPC SP-2 have also been reported.



Figure 4. Salt spray test showing no corrosion under the encapsulating system - close up

This encapsulating system can be used not just to provide an excellent corrosion protection for the flanges, fastenings and pipes associated but also as a preventive system which helps improving and easing further monitoring and inspection of flange faces.

Ensuring asset reliability has become one of the major challenges faced within many industries today.

As a result of this, a growing demand for new and more effective corrosion protective systems can be identified. The corrosion protection challenge presented by flanges has led to the development of a number of solutions. However, most of them fail to meet all the requirements of providing excellent corrosion protection, a simple installation, are suitable for all flange sizes and shapes, and allow easy access for inspection purposes. Made available in 2014, Belzona's innovative encapsulating membrane system has been specifically developed to meet all of these requirements. Its unique design ensures that further monitoring and inspection of flanged connections can be easily carried out.



Figure 3. Salt spray test showing no corrosion under the encapsulating system

Belzona Polymerics Limited

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belzona@belzona.co.uk

www.belzona.com

➤ Leveraging our 50-year history as the world's largest supplier of thermal imaging technology to military, government, and commercial customers, FLIR introduces a new line of test & measurement products built upon our commitment to innovation, quality, and reliability.

VFD TROUBLESHOOTING:
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CATEGORY: ELECTRICAL DIAGNOSTICS // SUBJECT: FLIR DM93

DM93: Rugged Design, Rapid Diagnostics, Reliable Data

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To learn more, visit www.flir.com

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FLIR

Harvest Energy selects Mainsaver CMMS for UK's largest biodiesel plant

Harvest Energy, one of the UK's largest independent suppliers of road fuels, has implemented Mainsaver CMMS from Spidex Software to help support a best-practice maintenance program at its production plant on Teesside.



Harvest Energy's biodiesel facility at Seal Sands has an output capacity of 250,000 metric tonnes per annum. It is the largest such plant in the UK and one of the largest in Europe.

Plant Manager Lee Wood led the CMMS evaluation, with the objective of finding a software solution that would make the process of scheduling critical preventative maintenance tasks quicker and more efficient. During this period, it emerged that a number of the site engineers had previously used Mainsaver at other industrial sites and spoke highly of its usability. This proved a significant factor in its eventual selection.

The Mainsaver project began with an install of the Mainsaver v.11.6 core modules Maintenance, Materials and Purchasing. This was followed by collection, formatting and upload of plant & asset

data into the CMMS, to which was attached the new preventative maintenance schedule. The final stage was comprehensive system user training for the engineers.

Lee Wood is enthusiastic about the results he has seen to date. "Mainsaver has given us a fantastic tool with which to plan and prioritise plant maintenance activities to great effect" he says.

"On a site of this size, process plant uptime and efficiency are critical. We have already seen a reduction in equipment breakdown due to the implementation of preventative maintenance scheduling, one of the key features of Mainsaver."

Spidex Managing Director Jonathan Starling commented: "It is a great pleasure to welcome Harvest Energy to the Mainsaver CMMS user community in the

UK. When a successful company like Harvest deploys Mainsaver in such an important production facility, it is true testimony to the robustness and reliability of our CMMS offering."

Harvest Energy already supplies more than 10% of the UK's requirements and is working towards market leader position in the supply of motor fuels to independent retailers. There are now more than 100 distinctively-branded Harvest Energy forecourts in Britain and the company also supplies a wide commercial customer base that includes supermarkets, logistics firms, bus operators and local authorities.

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CMMS: a planned attack

It has been said that 'any tool is a weapon if you hold it right', and this is never more true than when treading the minefield of choosing a computerised maintenance management software (CMMS) system.



Selecting the right system for your facility can pay dividends in increased productivity, higher quality of work and improved service levels but, in order for the benefits to be realised, it is essential that the product is implemented correctly.

CMMS software is a considerable investment for most organisations and many complex processes are involved in its implementation, yet most maintenance managers will have limited opportunities to gain experience of this during their career.

Gary Watkins, Managing Director of maintenance management software provider Service Works Group (SWG), highlights the key steps that will help to ensure a successful software implementation.

A typical implementation can take up to six months and usually includes the following key stages:

Pre-implementation

Once the contract has been awarded to a supplier and signed, the first stage involves an implementation meeting with the relevant stakeholders from the client and software supplier where the project team is decided and the project timetable, deliverables and constraints agreed. The project team will produce the project plan which is then signed off by all parties.

Data input/ import

The data phase is the most important part of the implementation project and can frequently take up to half of the allocated project time. Nowhere is the well-worn adage "rubbish in...rubbish out" more appropriate than in CMMS software, so it is essential that all the necessary information is correctly inputted into the system in order for it to deliver its full potential to the business. This stage of the project provides a good opportunity to review current data and clean it up before importing into the new CMMS tool.

Quality assurance

Whilst the quality assurance phase typically takes a relatively small amount of the allocated implementation time, it is an extremely important area. It is where the database is put through its paces, and thoroughly tested to ensure it meets the organisation's requirements.

Installation, configuration and training

All software claims to be user friendly, but the diverse nature of CMMS software, its inherent integrated components, and the computer-literacy levels of a typical user make the investment in training as important as the software itself. Most CMMS suppliers will offer a range of training options, including online and train-the-trainer courses, to ensure all users become familiar with the new system, irrespective of job role or location.

Test rollout and user acceptance testing

With administrators and users fully-trained on the new system, the next step is to go live with a test system.

Production rollout

The penultimate phase of the implementation plan is the ribbon-cutting moment when the data is migrated to the production system, and the 'go live' button pressed for a full system roll out. Many organisations run the two systems in parallel for a period, before 'flying solo' with the new system.

Project sign-off phase

But the project doesn't end at 'go-live'. Most software providers will provide post 'go-live' support to ensure that the system is working correctly, users and administrators are adequately trained and the business is starting to benefit from the new solution.

The development of an effective and realistic implementation plan is key to guarding against implementation failure and ensuring that the timely delivery of the new CMMS software solution meets the organisation's needs and delivers a rapid return on investment.

To help businesses make informed decisions, SWG provides a CMMS Toolbox series with a sample business plan template and software project plan, a project plan checklist and best practice for implementation guide, and an ROI calculator. To obtain a complimentary copy of Service Works' CMMS Toolbox, please email info@swg.com or call +44 (0)20 8877 4080, providing your name and contact details.

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Spidex Releases New Accident Reporting Software

Spidex has announced the release of Adverse Event Reporting, the latest software module from its comprehensive new ISIS health & safety management suite.

Adverse Event Reporting provides the means for companies to fulfil their statutory duty to record, report and investigate accidents and also enables recording and analysis of hazards, near-misses and unsafe practices to help create a safer workplace. If an accident occurs, it is vital that as much information about it as possible is collected quickly and accurately. Adverse Event Reporting enables users to record the details immediately on to a tablet PC at the scene or using a desktop computer afterwards according to circumstances. The module automatically generates a unique reference number and logs a hard-coded time/date stamp for each incident. Users can then record all the required details surrounding the event, including personnel involved, injuries sustained, accident location, accident type, details of witnesses, ambient conditions, emergency services involvement, among

many others. The software, with easy-to-use flexible forms, drop-down menus and body-map graphics (shown above) ensure that this data entry is as straightforward as possible. User-definable fields add even more flexibility. This valuable data is then stored within a secure, auditable, digital repository and can be linked with supporting documentation such as policies, statements and photographs for ease of retrieval and analysis by authorised individuals. "Creating a safer working environment is a priority for most organisations and that alone would be sufficient justification for selecting ISIS" says Spidex Managing Director Jonathan Starling. "There are also however, measurable financial benefits that can be realised following an ISIS implementation." "Typical examples might include reducing the number of compensation claims, defending claims



more rigorously with more accurate incident data, lower insurance premiums, minimising agency staff costs associated with 'lost time' incidents and improvements in general productivity."

ISIS Adverse Event Reporting is available now.

If you would like more information on the module or would like to see an online/onsite demonstration, please contact Andy Neilson on 0844 324 9190.

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Cable Entry Systems For Potentially Explosive Atmospheres

Selected products from the icotek cable entry systems available from M Buttkereit Ltd have been certified to comply with the EU Directive 94/9/EC (ATEX), for equipment intended for use in potentially explosive atmospheres of zones 1 and 21.

The ATEX (Ex) directive applies to all explosive industrial atmospheres including mining, with the icotek range of cable entry systems being suitable for zones G (gas) and D (dust) in equipment group II, category 2, certified to the ATEX directive.

The specific icotek products now ATEX rated cover two sets of cable entry frames being the KEL ATEX and the KEL-ER ATEX. These are split frame systems which are utilised with varied split grommet inserts to accommodate both un-terminated and pre-terminated cabling in a wide range of cable diameter options. Reduced installation times can be achieved while retaining the pre-terminated cable warranties, and also ensuring that any retro-fitting of cabling or routine maintenance can be quickly and easily accommodated. With a range of frames and inserts being available, high packing densities can be achieved.

Installations are vibration proof with automatic cable strain relief provided to EN 50262. Four frame sizes are available in each range with the KEL ATEX system covering 24 single or mixed groupings and cable O/D sizes while maintaining an IP54 rating. The KEL-ER ATEX split frame system provides an IP65 rating with 20 options of cable groupings and sizes.

Cable entry plates include KEL-DPZ ATEX products in both rectangular and round options. The rectangular products cover cable diameters from 3.2 to 22mm and incorporate membrane sealing with IP65/IP66 rating as well as automatic strain relief. The round cable entry plates in the range cover the same standard cable sizes but with an immediate dual seal rating of IP68. They can be utilised for standard or metric cut-outs with polyamide locknuts also provided.

A split cable gland assembly KVT 80 ATEX is also available, particularly suited to routing and sealing pre-terminated cables with bulkhead thicknesses from 1.5 to 10mm. Where larger undetermined cable diameters need to be accommodated, then the KEL-DPF ATEX cable entry inserts can be utilised. These can also accept rigid pipework or cabling where angled entry needs to be accommodated.

ATEX stands for 'Atmosphere Explosible' and is the short name for the European Directive 94/9/EC, regulating the market launch of explosion protected electrical and non-electrical devices, components and protection systems. Since July 1, 2003 in effect, it applies to all new equipment and protective devices. The directive is aimed at manufacturers and importers in the 27 member states of the EU as well as the 4 EFTA member states and Turkey.

The ATEX directive applies to all electrical and non-electrical and protective systems intended for use in potentially explosive atmospheres.

Moreover, the directive includes controlling, monitoring or regulating equipment which may be located outside of explosive atmospheres, but ensures the safe operation of devices and safety systems within.

The ATEX directive applies to all explosive industrial atmospheres, including mining. The directive describes basic safety and health requirements for equipment and components intended for use in potentially explosive atmospheres. It describes procedures to demonstrate conformity with the directive. Depending on the risk area in which



Above: Typical icotek cable entry products which are now certified to comply with the EU Directive 94/9/EC (ATEX), and are available from M Buttkereit Ltd.

the product is used, (conformity assessment procedures) requirements and procedures for assessing fulfilment are different.

Since 2003, every new Ex device must be certified according to the EU Directive, labelled with the CE marking and the special marks for prevention of explosions. icotek has certified a wide variety of products.

All devices, components and protective systems intended for use in potentially explosive atmospheres, have to comply with the European Directive 94/9/EC.

Further information is available on request to:
M Buttkereit Ltd, Units 1 & 2, Britannia Road
Industrial Estate, Sale, Cheshire M33 2AA
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New Dosing Performance Pumps Launched

Wanner International has introduced two new Hydra-CellR Dosing Performance Pump ranges with mechanical flow rate adjustment.

Because seal-less Hydra-Cell pumps are true positive displacement pumps, flow rate is directly proportionate to input shaft speed and virtually independent of system discharge pressures.

Very precise, infinite adjustment of shaft speed is achieved through a simple manual adjust hand wheel.

The variable speed gearboxes operate on the elastohydrodynamic principle, producing output torque by means of a traction fluid. This removes the possibility of mechanical slippage between input and output, potentially experienced with friction type variators.

The Hydra-Cell G03/G13 dosing range accommodates repeatable, steady flow

requirements up to 310 litres per hour at pressures up to 100 bar and flows up to 490 litres per hour at pressures up to 70 bar.

The Hydra-Cell G10 dosing range accommodates repeatable flow requirements up to 732 litres per hour at pressures up to 103 bar and flows up to 1470 litres per hour at pressures below 50 bar.

These mechanically adjustable dosing pumps are ideal for use in ATEX Zone 1 and 21 when coupled to compatible, explosion proof motors which can also be provided.

Both ranges come with a variety of cam profiles to meet specific flow rate adjustment requirements and



a variety of pump head materials is also available including Cast Iron, Brass, Hastelloy CW12MW, Polypropylene, PDVF and 316L Stainless Steel.

Further information from:
Nick Herrington, Wanner International.
Tel +44 (0)1252 816847
Email: NHerrington@wannerint.com
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Bray Gravels Water Pumping Station Gets An Upgrade

South East Water's Bray Gravels pumping station has an essential role to play in supplying fresh water to around 300,000 homes immediately to the west of London.



Fig.1 Refurbishment work was undertaken on all the pumps at AxFlow Windsor base.

Built more than 30 years ago, the pumping station draws water from boreholes close to the River Thames at Maidenhead and pumps it to the Surrey Hills and Crowthorne Reservoirs some 10 miles away. However, although continuing to supply water to these reservoirs, by 2011 the three Weir two stage high head split volute water transfer pumps, which by now were obsolete, had become less than efficient and unreliable.

South East Water's programme of investment for capital maintenance identified the need to reduce possible future failure either by replacement or refurbishment. To assist in making the choice resources of AxFlow Windsor were requested.



Fig. 3 All the pumps required new motors which had to be adapted for the pumps.

In the period between the three pumps first being installed in the early 1980's and 2011, the demands on the pumping station had changed, exposing the pumps to fluctuating operating regimes. Consequently, over the years each of the pumps had at times been run off the true pump curve to detrimental effect. In late 2011, AxFlow Windsor took a look at one particular troublesome pump and once removed and opened up, examination revealed substantial wear and component fatigue largely attributable to cavitation. Specifically, the suction impeller was eaten away and required reverse engineering to bring it back to the original specification. The reverse engineering included the making of new sand casting patterns and the casting of a new impeller from bronze. This new rough casting was then to be machined to the same dimensions as the old impeller. Faced with the option of purchasing a replacement unit or carrying out a comprehensive repair and rebuild programme, South East Water went for the refurbishment option.

The decision was taken in the knowledge that AxFlow had the necessary engineering resources to return the pumps to full long term operating condition and that this also provided the best return on investment (Fig.1). The initial programme of works included replacing the pump bearings, motor bearings, mechanical seal, propshaft, universal joints, gaskets, efficiency liner, together with reverse engineering the suction impeller, dismantling the motor and testing the windings, rebalancing the propshaft, shot-blasting, painting and reassembly. Coupled with this were the logistics of dismantling the motor and pumps and removing them from site and then reversing the process for installation, testing and commissioning. Given the size and weight of the pump and motor, this was not exactly a straightforward task and further complicated by the fact the pumps had been installed before much of the current pump house had been constructed. This was not the end of the enterprise, for once the pump had been stripped down and analysed back at AxFlow's premises, other elements were identified that required attention.

During the period when the pump was at AxFlow's service base, the two remaining pumps and motors failed, leaving the station with a reduced capacity to transfer water. As a result of the two pumps running at high speeds and temperatures, both the motors burned out on the same day. AxFlow alleviated the problem by locating a temporary motor that enabled Bray Gravels to maintain operations. But even this was not straightforward because the existing motors which had failed were fitted with European Standard shafts, making it impossible to get a motor-off-the-shelf. However, AxFlow were able to locate a suitable motor in another part of the country and make modifications that would allow it to be used on one of the pumps. This response meant that the station was up and running within days without there being any impact on the supply to South East Water's customers.



Fig. 2 Main pump hall at Bray Gravels after all the pumps had been reinstalled and commissioned.

As a result of this emergency, South East Water embarked on a programme of repairing the two remaining pumps and after a due tendering process, the contract was awarded to AxFlow. Work commenced on the refurbishment of these pumps in 2012.

A major difficulty when refurbishing older pumps is matching up new to old. The existing motors were so old they were not suitable for running with inverters, because they did not have insulated bearings. Therefore, new motors were required for all three refurbished pumps (Fig.3). However, because non-standard motors were required AxFlow had to make a special adaption plates to accommodate the motors. Furthermore, the new motors had larger shafts making it necessary to make three new couplings to fit the new motors in order that they could be coupled up to the propshafts.

With all three refurbished pumps now installed and commissioned, Bray Gravels has the capacity to pump up to 360 megalitres per day at a head up 11.5bar, using just two pumps. By sharing the load at peak demand, the pumps can operate within their curves and can be run at lower speeds, thereby removing the potential for cavitation. The refurbishment of all three pumps, together with the installation of the new motors and recommissioning was completed in late 2013 (Fig. 3). The project grew from sorting out problems on one particular pump in to a major overhaul of the water transfer pumping capability. The pumps and motors have been given a new lease of life and South East Water can look to many more years of service from Bray Gravels.

For further product details, contact:

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AxFlow Ltd
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Ealing
London W13 9SJ

Tel: 020 8579 2111
Email: info@axflow.co.uk
www.axflow.co.uk

Jacob Food Grade Range - New Products – Higher Standards

JACOB (UK) has introduced a new food grade range of modular stainless steel pipework which is the first in the market to meet the stringent requirements of the European EC 1935/2004 standard, as well as the American FDA food regulations.

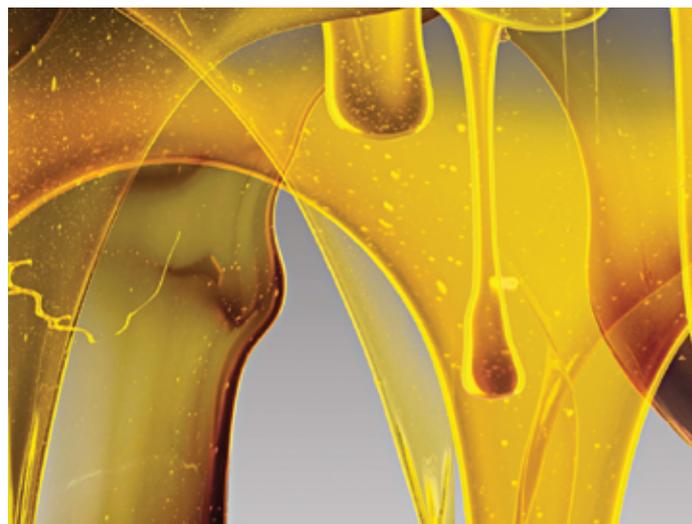
The new JACOB FOOD GRADE range is a modular, stainless steel pipework system with more than 3000 products. In excess of 1000 of these product components, from the stainless steel parts through to the adhesives and sealing materials, were replaced or redesigned to ensure that all food contact parts satisfy the rigorous EU requirements of the EC 1935/2004 directive.



The new 'adhesive free' vulcanised elastomer U-shaped seals not only ensure food grade compliance, but have better temperature and tear resistance than conventional glued seals. All components that come into contact with food are made exclusively from quality DIN standard stainless steel V2A/1.4301. The use of adhesives is avoided as far as is possible, but in situations where this is impossible, only food-grade adhesives are used.

JACOB (UK) Director John West said: "This marks yet another a major step forward in pipework technology and offers huge benefits for designers and manufacturers, where top specification modular pipework systems set higher hygiene standards".

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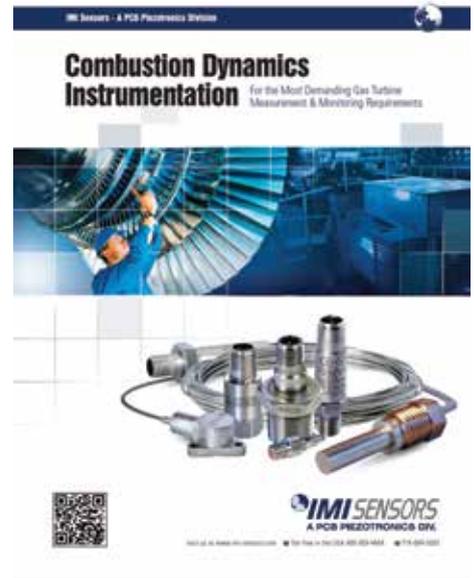
PCB Piezotronics announces the release of a brand new Combustion Dynamics Instrumentation brochure highlighting application-specific solutions for monitoring gas turbines.

The brochure features sensor placement illustrations and is designed to help gas turbine operators select the optimal pressure sensors and accessories for monitoring gas turbines.

With the trend toward increased fuel efficiency and low NOx emissions, today's gas turbines operate more efficiently but have to be closely monitored and controlled to avoid combustion instability. This instability can damage components in the combustion chamber such as nozzles, baskets and transition pieces, as well as downstream components such as blades, resulting in avoidable downtime and loss of revenue.

The new brochure lays out the three main applications for detecting and measuring combustion dynamics in gas turbines: Remote Sensors, Close Coupled Sensors, and On-Turbine Instability Sensors (OTIS). In the case of OTIS, IMI's Series 176 high-temperature pressure sensors (986F, 530C) are directly mounted at the gas turbine combustor. The brochure also includes IMI's full line of high-temperature accelerometers for vibration monitoring of gas turbines in heat environments of up to +1200°F (+649°C).

The Combustion Dynamics Instrumentation brochure as well as additional information about sensors for



gas turbine monitoring is available from: <https://www.imi-sensors.com/GasTurbineMonitoring.aspx>.

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ATS Electro-Lube (UK) Ltd Have Added Another Product To Their Well Proven Range Of Self Contained Automatic Lubricators.

The new Jack-Luber is a fully self-contained battery powered lubricator available with either a 125cc or 250cc replaceable grease cartridge.

Grease cartridges can be supplied filled with the specific brand & type of grease type required for the application & can be changed in seconds by the user.

As the Jack-Luber is a motor-driven lubricator, it can generate up to 250psi operating pressure, meaning that it can be used with long feed lines or in cases where there is high back pressure at the bearing.



Jack-Luber Model 125 & Replacement Cartridge

The innovative new Jack-Luber incorporates a Jackscrew mechanism which reduces wear & therefore prolongs the operational life of the unit. Once activated, the Jack-Luber runs intermittently to supply grease on the optimum "Little and Often" principle. Integral switches allow users to set the required feed rate, allowing up to 2 years operation between cartridge/battery change.

The Jack-Luber is suitable for indoor or outdoor use and is not affected by changes in temperature. In addition, the Jack-Luber is certified intrinsically safe for use in hazardous areas.

This new addition fills the gap in the ATS Electro-Lube product range, fitting between the low pressure (50 psi) Electro-Luber Gas Series and the



higher pressure (900 psi) Ultimate-Luber Motor Drive Series.

Detailed information, including demonstration videos for the entire ATS Electro-Lube product range can be found at their new website: www.atselectrolube.co.uk.

NEW INVERTER-BASED AC/DC POWER SOURCE PROVIDES HIGH QUALITY GTAW (TIG) AND SMAW (MMA) WELDING

ESAB, a world leader in welding and cutting technologies, introduces the Heliarc™ inverter-based AC/DC power source for AC/DC GTAW (TIG) and SMAW (MMA) welding.

Heliarc provides superior AC/DC GTAW (TIG) and outstanding AC and DC SMAW (MMA) performance, including cellulose (E-XX10, E-XX11) electrodes.

The Heliarc power source uses inverter technology, which delivers significantly increased energy efficiency and superior functionality in a package that is lighter, smaller, and less expensive than old, less efficient SCR technology machines.

Easy-to-achieve, optimized arc settings enable the operator to weld aluminum using a pointed tungsten. The tungsten remains pointed improving arc starts, heat input and arc stability, thus assuring high quality welds.

Heliarc's pulse current allows for smaller HAZ (Heat Affect Zone), better control of the weld pool, and less plate deformation.

In AC GTAW (TIG) mode, the power source uses high frequency (HF) only to initiate the arc, compared to older power source technology which requires HF to be

continuous. Heliarc's fast switching AC process removes the need for HF during welding, reducing electrical noise and the risk of interference to surrounding electronics. Additionally, high frequency can be switched off in favor of ESAB's live TIG arc start method when welding in areas where high frequency is not permitted.

Enhanced AC balance controls provide significantly improved cleaning or penetration compared to conventional AC/DC power sources. Moreover, Heliarc provides an AC frequency control which focuses the arc for narrow weld beads and faster travel speed. Reducing the weld bead has significant advantages in reducing cost, as well as in reducing welding consumable and arc time, resulting in improved efficiency and operating profit.

Heliarc also features AC Pulse (GTAW) TIG from 0.4 up to 2Hz ideal for welding thin aluminum. High speed DC pulse GTAW (TIG) provides a smooth welding output which is precisely controlled to deliver faster travel speeds and more penetration. Increasing the pulses per second also improves



arc stability and perfects interfusion between base and filler material.

Heliarc's control panel is easy to setup and operate. Five clear, logical work zones allow the operator to choose the options and settings needed for fast set up and excellent arc control.

All controls are centrally located. Easy-to-use buttons provide slope down, pulse current, background current, pre-gas, post-gas, pulse and duty options. The machine's memory can store and recall up to 60 user-defined welding programs. The machine's internal communication is entirely digital for high accuracy and repeatability.

For more information about Heliarc, visit www.esab.co.uk or call 0800 389 3152. Follow ESAB UK on Facebook.

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Emergency Chiller Call-Out Can Save Productivity Loses

By Carl Webb – Director of Andrews Chiller Hire



Short term plant equipment hire may be necessary to obtain a special piece of kit to complete a project, alternatively it may be brought in as a temporary but essential back-up when there is a significant in-plant failure.

Essential too many processing plants is the requirement of a constant supply of chilled water, whether to keep production machinery at the correct temperature or to cool actual products, in extremely diverse industrial sectors such as food, pharmaceutical, electronics and metalworking. When the essential supply of chilled water is interrupted it can have a detrimental effect on production, quality and safety as well as huge financial implications.

Take for instance plastic component manufacture, here chilled water may be used to cool the actual injection moulding machines to prevent overheating as well as being used to lower the temperature of the finished component. In cider production chilled water is used to maintain constant temperature in the fermentation process however it is during bottling that chillers are mainly used as CO₂ dissolves better in colder water. It is also essential to uphold a strict temperature at this stage to prevent the cider from 'fobbing': when a drink's head is too big and frothy.

These two industrial processes are poles apart but so reliant on water at a constant low temperature supplied through on-site chiller plant. When the supply stops maintenance engineers are under extreme pressure to resolve the situation, it could

be simply a stuck valve or a more serious incident where the plant has developed a major problem that could remain unsolved for many days.

Whilst major repairs take place the prime alternative is chiller hire, unquestionably the right decision, maintenance engineers and production managers turning to specialist hire companies with a huge choice of equipment, a nationwide network of hire depots and an experienced engineering team. Their efficiency could mean your business is just hours away from being back into production.

Real Emergency Sunday Call Out

Provision of uninterrupted chilled water is an essential element for processing cooling systems in the nuclear power industry. When one of the UK's largest nuclear power stations started losing supply of its process cooling water as a result of compressor failure and quick repair unlikely the plant management team looked towards a 'fast fix' by



contacting a leading specialist chiller hire company to provide a temporary solution that could be installed within 12hrs.

Plant failure for any processing operation, and in particular a power station, can have high profile consequences and often high losses should any of their processes go off line.

Despite it being a Sunday afternoon, an emergency call went out to chiller hire specialists Andrews Chiller Hire and engineers at the company were able to set wheels in motion that meant a temporary solution was in place, delivered, installed and commissioned successfully within 12 hrs, achieving a positive outcome in that the nuclear plant lost no production; potential losses could have amounted to many thousands of pounds.

Established Contacts

This example highlights that however efficient Routine Planned Maintenance Programmes are adhered to the unexpected can happen.

Striking up a working relationship with an established chiller hire company before its services are required could turn out to be one of the wisest decisions a plant manager makes, chiller hire plant can be ready and waiting, matched to specific and unique requirements. On-site in just a few hours it could prevent serious downtime and save a reputation.

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For further details:

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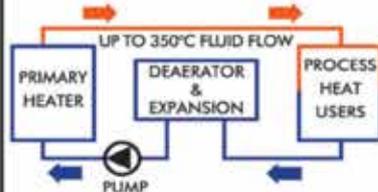
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