



Feb/March 2021

\$6.80

£4.16

€5.00

ENGINEERING MAINTENANCE SOLUTIONS

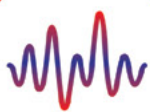
The International Magazine For Maintenance & Engineering Professionals

Automated Fault Diagnostics, Trending and Prognostics

Read More On Page 5



Belt Drive A1
Energy Loss: 9.72%
Energy Wastage: 1.450kW
Additional Cost Per Year: £1,778



6-11

Condition Monitoring

24-28

Pumps & Valves

42-43

Automation

Visit Us Online
engineeringmaintenance.info

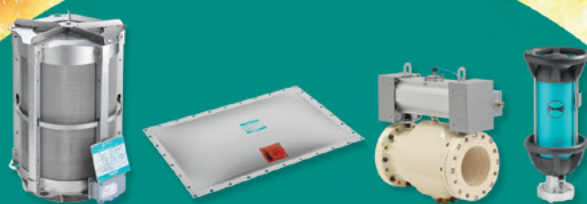




Safety is for life.™

T +49 2961 7405-0
info@rembe.de

■ Made
■ in
■ Germany



REMBE® EXPLOSION SAFETY

Consulting. Engineering. Products. Service.

© REMBE® | All rights reserved

REMBE® GmbH Safety+Control

Gallbergweg 21 | 59929 Brilon, Germany
F +49 2961 50714 | www.rembe.de



Contacts



Publisher

Michael Dominguez



Advertising

Steve Pheasant

stevep@engineeringmaintenance.info

Email

Info@engineeringmaintenance.info

Website

www.engineeringmaintenance.info

Phone

Tel: +44(0)203 575 1170

Contents

In This Months Issue



P:4-5 Front Cover Story

P:6-11 Condition Monitoring

P:12-15 Hire & News

P:16-17 News

P:18-21 EMS Team Chosen Products

P:22-23 News & Products

P:24-28 Pumps & Valves

P:29-30 Compressed Air

P:31 News

P:32-33 CMMS

P:34-35 News & Products

P:36-38 ATEX

P:39 News & Products

P:40-41 Bearings

P:42-43 Automation

P:44-45 EMS Team Chosen Products

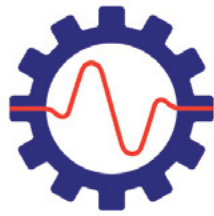
P:46-47 Buyers Guide

In the next Issue: April/May 2021



BCAS Official Media Partners

- Condition Monitoring
- Boilers and Burners
- Materials Handling
- Industrial cooling
- Calibration
- Internet of things
- EMS Teams Chosen Products



FARADAY PREDICTIVE

**ENABLING SOLUTIONS IN CONDITION-BASED MAINTENANCE
TODAY FOR A BETTER WORLD TOMORROW**

**Specialists in the application of Model-Based
Voltage and Current (MBVI) systems**



info@faradaypredictive.com

(+44) 0333 772 0748

Providers of portable and permanently installed condition monitoring and energy monitoring and optimisation systems. Faraday Predictive systems require no sensors to be mounted on your plant equipment, instead we use the electric motor driving your equipment as the sensor. Simply by measuring the voltage and current drawn by the motor we can identify an astonishing amount of information about developing problems in your equipment, giving you an indication of current condition and predicting future condition for up to three months in the future. We provide easily understood advice on the nature of the fault, how we have diagnosed it, the effects it is likely to have, and what you should do about it. We also quantify the energy being wasted by faults, allowing you to cost-justify corrective work on energy saving grounds.

For more information see our website or contact us direct.

The best Condition Monitoring systems can now provide Automated Fault Diagnostics, Trending and Prognostics to help you plan maintenance work – and only when it is needed.

Condition Monitoring (CM) gives its full value when it is used to drive Condition-Based Maintenance (CBM) or at the very least is used to plan corrective work before machine failure occurs.



However, just having an overall measurement of machine condition, such as an overall vibration level reading, doesn't tell you enough to do this. What you need to know to plan efficient corrective work before machine failure is:

- What is the nature of the fault that is developing?
- How rapidly is it developing?
- What should I do about it?
- When will I need to intervene?

Faraday Predictive provide all of this information without needing to cover your machine with sensors – in fact without fitting any sensors on the machine itself, because the Faraday Predictive system effectively turns your electric motors into sensors of machine condition.

Faraday Predictive use what are known as MBVI – “Model-Based Voltage and Current” systems.

By simply measuring the voltage and current drawn by the motor, the Faraday Predictive system provides an astonishing amount of information, including:

- What phenomena (eg faults) are detectable in this machine?
- How severe are each of those phenomena or faults?
- What does the developing trend for each fault look like?

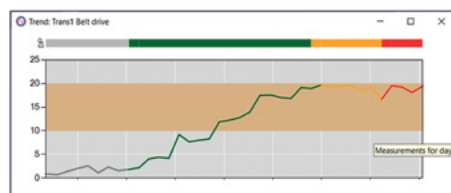
- When is it predicted to reach a level that will need maintenance intervention?
- What is the recommended corrective work?

An example of the sort of phenomena that can be detected in any one machine is shown outlined in green on this typical screen output shown here:



The Faraday Predictive system can identify around 40 different phenomena, including unbalance, misalignment, bearing problems or belt drive problems in addition to a dozen measured parameters that can also indicate developing faults, such as overall levels of voltage and current, active power levels, phase imbalance, voltage distortion and current distortion – but will only indicate those that are relevant to this particular machine. The system itself identifies which phenomena are relevant automatically.

For any one of these phenomena, the system can plot a trend graph of the severity developing through time – for example here is the plot for a belt drive problem:



Belt drive faults are identified from signals at the characteristic frequency of the belt – which the system calculates for itself as the time for the belt to go around both pulleys and back to the starting point, based on three simple parameters that you enter into the system – the diameters of the two pulleys and the centre-to-centre distance between them. Other faults are identified in a similar manner based on their specific characteristic frequencies. More details of this can be found here:

<https://www.faradaypredictive.com/technical-education/diagnostic-outputs/4634-belt-drive-condition-and-energy-waste/>

An added feature of the Faraday Predictive system is that, being based on measurements of voltage and current, it can not only calculate the energy being used by the machine, it can also quantify the amount being wasted by each fault. It also translates these kWh figures into real money – showing you how much each fault is costing you during the course of a year, allowing cost justification of maintenance interventions, even before reaching the risk of actual machine failure. It surprises many engineers to see just how much a modest sized motor costs in electricity to run each year – here a 15kW / 20HP motor can be seen to be costing over £18,000 / year – of which nearly 10% is being wasted by faults:

Energy usage:	14.910kW	£18,286/yr
Energy wastage:	1.450kW	£1,778/yr
Unit energy cost:	£0.14/kWh	

So in summary, the Faraday Predictive condition monitoring system not only tells you about developing faults in your machines, it also tells you what to do, when to do it, and the cost benefit of it in electricity savings that will result. Not bad for a condition monitoring system!

For more information about Faraday Predictive visit:
www.faradaypredictive.com

Simply Plug > Play > Predict with the award-winning CM solution OPTIME

Easily scalable; your machine operators, process plants and entire manufacturing sites can now benefit from the use of OPTIME.



Schaeffler's new Condition Monitoring (CM) solution, OPTIME, offers a unique set of benefits over alternative CM systems. In simple terms, users can Plug > Play > Predict. The installation is straightforward and does not require any specialist expertise. The machine diagnostics are displayed instantly, showing the maintenance engineers where they are needed.

It offers automated data analysis at an expert level. With low installation outlay and rapid initial operation, OPTIME allows the implementation of CM for a high number of machines, whose condition previously could not be monitored cost effectively.

In recognition of its unique, innovative approach to condition monitoring, OPTIME recently received the 'Industry 4.0 Innovation Award 2020'. An annual award from VDE Verlag in collaboration with the German Electrical and Electronic Manufacturers' Association (ZVEI) as well as the Standardization Council Industry 4.0.

Machine operators, process plants and entire manufacturing sites can now benefit from the use of OPTIME, as well as professional CM service providers and power transmission specialists who wish to expand their portfolio.

A key benefit of OPTIME is that maintenance managers can install the system themselves and monitor their machines at expert level without assistance. Easily scalable, OPTIME consists of a mesh network of wireless, battery-powered vibration sensors, a gateway with SIM card, data analysis in the cloud and an app for mobile and desktop devices to visualise the condition of all assets.

The data captured by the sensors is analysed using specially developed algorithms that draw on Schaeffler's technical expertise. Their extensive library of physical models developed and refined over many decades and the company's vast experience in condition monitoring of rolling bearings.

OPTIME provides an early warning of rolling bearing damage to machine components such as motors, fans and pumps, several weeks' in advance. It also provides an early warning of imbalances, misalignments, cavitation in pumps, gearbox damage and lubrication issues.

The app presents trends in graph form and visualises the severity of incidents using traffic light colours and alarm states. Maintenance teams receive specific recommendations on the steps required, so they can easily plan their maintenance work, manpower needs and spare parts procurement.

Minimum outlay, maximum benefit OPTIME can be installed and initial operation carried out without any prior CM expertise. Several hundred measurement points can easily be set up in a single day. The vibration sensors are screwed directly on to the asset or by using a mounting plate secured using adhesive. They are activated by the accompanying app, which connects to them via near-field communication (NFC).

All installed sensors communicate autonomously with each other and the gateway, thereby forming a dedicated mesh network. The sensors transmit machine KPI data as well as raw vibration and temperature data via the gateway to the Schaeffler IoT Hub. The hub analyses the data, and the results are displayed in the app. Alternatively, analysis results can be made available for integration into the customer's own IT environment via a REST API.

For more information of how OPTIME can work for you please visit https://www.schaeffler.co.uk/content.schaeffler.co.uk/en/products-and-solutions/industrial/productportfolio/maintenance_products/optime/index.jsp

Register for the white paper Monitoring for the early detection of damage and defects does not necessarily make good economic sense for every machine or system. Schaeffler's white paper, entitled "Is machine monitoring worthwhile?", serves as a guide in evaluation and is intended to support end users in their decision making by providing them with tips, calculation examples, checklists and examples from practical experience.

To register for your copy of the white paper, visit: <https://www.schaeffler.de/content.schaeffler.de/en/products-and-solutions/industrial/industry-4.0/white-papers/white-paper-machine-monitoring/index.jsp>



We pioneer motion

How I always keep my cool within my production chain



OPTIME

enables me to keep an eye on hundreds of machines in just a few hours – which makes OPTIME a quick, easy and economical condition monitoring solution.

www.schaeffler.com/optime

SCHAEFFLER

Particle Pal Pro: The Pinnacle of On-Site Oil Analysis

Filtertechnik's tablet-based portable oil analysis kit gives in-depth analysis and portability through new digital imaging technology. A 10" touch screen display literally puts all the metrics you need at your fingertips. Particulate counts and analysis, water content and remaining oil life.



While user-friendly, the 10" LCD offers meticulous, multi-stage analysis. The software contains over 500 oil ageing profiles.

The rugged, rechargeable design is suitable for in-field use on oils or diesel fuel up to 4,000cst. Sample images of a fluids contamination and full reporting are built in.

For more information visit:
www.filtertechnik.co.uk

The new digital imaging camera takes 4 frames-per-second at intricate resolution, recognising anything that is 2 microns and above. Additional benefits are advanced algorithms which sort particles by size and shape giving root cause analysis. An additional benefit is that the camera recognises air bubbles and eliminates them from ISO counts.

Laser particle counters see anti-foaming Siloxane based additives as particles and give higher readings, often 2 to 3 ISO codes higher. The digital imaging technology in the Particle Pal Pro ignores these Siloxane additives and only counts solid particulate.

The main benefits of digital imaging particle counters are:

- The size and quantity of particulates are calculated immediately. ISO, NAS cleanliness codes and full particle counts in the: 4, 6, 14, 21, 38, 70 and >100 micron ranges are all counted and reported
- Air bubble elimination and shape recognition offers root cause particle analysis. Particles are categorised as Sliding, Cutting or Fatigue wear. Bubbles and fibres are also recognised and reported.
- Oil life indicators and Water content sensors complete the multi-analytic package.

THE FUTURE OF PARTICLE COUNTING

SHAPE RECOGNITION

AIR BUBBLE

PARTICULATE

SHAPE RECOGNITION

PARTICLE PAL PRO FEATURES

- ✓ Digital Imaging Particle Counter
- ✓ Bubble elimination
- ✓ Shape recognition:
 - ✓ Fatigue wear
 - ✓ Cutting wear
 - ✓ Sliding wear
- ✓ Higher viscosities up to 2,400 cSt
- ✓ Broad range micron counts - 4, 6, 14, 21, 38, 70, >100

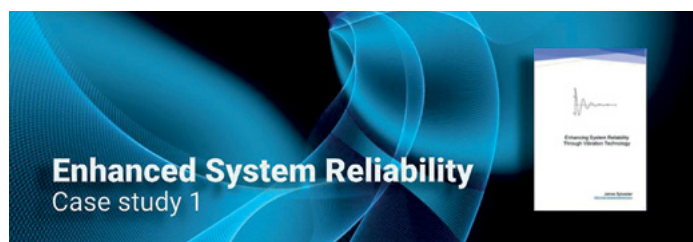
Portable oil & fuel analysis

0800 087 456
www.filtertechnik.co.uk
sales@filtertechnik.co.uk

FT
Filtertechnik

Case Study 1: Enhanced System Reliability

Electrical Vibration Problem: This is the first of five video case studies on Enhanced System Reliability by James Sylvester.



In this first case study James shows how vibration analysis can be used to diagnose electrical vibration problems. In this case a VFD driven Motor. Over the next few weeks James is going to share a selection of interesting vibration analysis case studies. Enjoy, and please share if you found it useful.

For more information visit: <https://rms-reliability.com/vibration/case-study-1-enhanced-system-reliability/>

RMS
RELIABILITY TRAINING INSTITUTE

Condition Monitoring

CAT-I COURSES

Vibration Analysis Ultrasound Analysis

Virtual Instructor-led CAT-I courses include 30 hours of live instruction and all 'Printed Materials'. BINDT or MIBoC exam optional. See Website for closing dates.



 **COUPON CODE: VLED4**

REGISTER AT
RMS-TRAINING.COM

Valmet to supply steam profiler and condition monitoring solution and services to Zhejiang Jingxing Paper Co., Ltd. in China

Valmet will supply Valmet IQ Steam Profiler and Valmet DNA Machine Monitoring systems with condition monitoring analysis and diagnosis services to Zhejiang Jingxing Paper Co., Ltd. in China. The systems will be installed on Jingxing Paper's paper machines PM12 and PM16 to provide effective moisture profile management and predictive condition monitoring, and to improve production runnability and end-product quality.

The order was included in Valmet's orders received of the fourth quarter 2020. The delivery will take place in the first quarter of 2021.

"Valmet is one of our strategic partners, and we have had good cooperation with them. We believe that Valmet's automation solutions and innovative technology will help us improve production reliability and better product quality," says Xiaodong Qian, General Manager, Industrial paper department, Jingxing Paper.

"We are happy that Jingxing Paper has chosen our solutions to improve their plant productivity and

performance. Valmet DNA Machine Monitoring system and our new user interface will provide adequate machine information and enable vibration analysis and diagnosis service via Valmet Industrial Internet remote connection," says Liang Zhou, Sales Manager, China, Automation, Valmet.

Information about Valmet's delivery

The Valmet IQ Steam Profiler is a multi-zone steambox system that provides unique profiling accuracy through its electromechanical actuator with position feedback. It features advanced steam injection technology that maximizes steam

absorption efficiency and temperature increase to provide increased dryness after the press.

Valmet condition monitoring solutions produce real-time machine health information for effective planning and scheduling of maintenance operations.

Information about the customer Zhejiang Jingxing Paper Co., Ltd.

Founded in 1984, Jingxing Paper is one of the largest industrial papermaking enterprises and kraft paperboard manufacturers in China. The company is listed on Shenzhen Stock Exchange. The company has annual capacity of 1,500,000 tons of paper, main grades are kraft paper, white craft paper, high strength corrugating medium, cardboard boxes and household paper products.

For more information visit:
www.valmet.com

Transforming efficiency and quality through asset monitoring

High standards within the hospitality and retail industries are crucial to success and profitability, from ensuring the best food quality and sustainability practices to streamlining operating costs – but how can this be achieved every time, without fail?



Clearly there's a great deal of infrastructure involved from ovens to refrigerators and freezers, and these are crucial assets that ensure the best quality whilst playing a large role in sustainability. This equipment also makes up a high proportion of operating costs in energy usage, but are these systems operating at their most efficient level? The only way to ensure this 100% of the time is through smart condition monitoring systems that can help to transform quality and energy efficiency by alerting staff to any underperforming assets.

Monitoring assets in this way allows businesses to view a complete picture of asset performance, and understand if there are any issues, before these escalate into bigger problems. For example,

if a refrigerator keeps dropping to a potentially incorrect and unsafe temperature, the monitoring solution will send out an alert to ensure this is looked at before it potentially fails overnight and wastes large quantities of food, costing the business in stock value and customer satisfaction.

Alarms of this nature can be quickly distributed to response teams so that issues can be dealt with in a timely manner and situations managed. Wired sensors are not overly suitable for such environments, for instance in fridges and freezers having a wired sensor would require a gap in the seal to allow an exit/entrance port for the cable, or it would enter from the door and so compromise the temperature. Instead, wireless sensors are the

much smarter option, automatically transmitting the data to a cloud platform (via a 2G, 3G, 4G or broadband gateway) that compiles the data and presents it for full transparency, to registered users across any device.

Not only does this prevent the costly disasters of spoiled food but it reduces the manual element of maintaining these systems. As per compliance standards, readings must be taken several times each day to check the temperatures are correct, taking valuable time out of people's days to manually test and report. In addition, this method isn't necessarily that accurate, after all, temperature read-outs in older style units can "drift" at 0.5°C per annum, and 50% of LED readings on the outside of fridges and freezers are materially wrong. However, with automatic temperature monitoring, this is performed quickly, easily and much more frequently and accurately to ensure optimum efficiency across the board.

In today's day and age sustainability is a key focus on the journey to decarbonisation, and the efficient use of energy systems is a core part of this. 63% of energy use is electricity for heating and cooling systems, and so clearly these assets can cost businesses and our planet a significant amount if they're not operating at their optimum efficiency. By having condition monitoring in

place, the system can automatically flag if the unit is drawing more power than usual, a sign that maintenance is required, preventing issues ahead of time and allowing for engineers to improve the efficiency of equipment to streamline costs and sustainability.

Not only does this help the industry, but food quality can drastically improve through advanced monitoring systems, for example ice cream and yoghurt needs to be kept at specific temperatures and can suffer from overchilling which ruins the quality of the product and reduces customer satisfaction. Overchilling also costs businesses unnecessarily through energy costs. For each 1°C a fridge or freezer overchills, energy use and cost increase by 2.5% to 4% per degree, but with monitoring, this can be avoided and the automatic data retrieval by the sensors ensures that cooling assets remain at the correct temperature.

Managing larger quantities of assets also becomes significantly easier through automatic wireless sensors, because the data can be sent over long range frequencies and so the gateway where the data is processed can be far away and can cope with multiple data transmissions at any one time if there are multiple assets in the area. Costs are low with this type of smart technology too, particularly compared to the clear cost-savings that can be leveraged from streamlining systems in this way.



Klaus Allion, ANT Telecom

This technology stretches beyond temperature monitoring too, with options such as CO2 monitoring, the opening and closing of doors, energy consumption, power consumption and lots of other types that help to streamline processes and optimise efficiency within the estate.

Across the many appliances that businesses have, these incremental temperature differences and all the extra minutes of electrical unit operation add up, but by unlocking the visibility of the entire infrastructure through wireless sensor monitoring there are clear cost-savings and quality of food can be drastically improved, whilst importantly boosting energy efficiency and sustainability. It gives managers the power to see their assets in

full and it provides the blueprint for proactive and corrective adjustments. Parameters can be set, and if assets go above or below these thresholds an alarm will be activated by the sensors to ensure the problem is visible straight away, before it becomes costly. It's non-invasive, secure, and also provides a reference point when looking at new equipment and technologies. The benefits certainly stack up, and this technology can be implemented quickly and easily to leverage smarter working across the industry.

For more information visit:
www.anttelecom.co.uk

New MCA Fusion Hire Test Upgrade Puts Focus On Specialist Safecheck Technology

One of the country's leading suppliers of specialist hire equipment is rolling out a new investment programme to upgrade its electrical testing facilities throughout its national branch network.



MCA Fusion Hire & Repair, part of Wolseley UK's Infrastructure division, is a leading provider of butt fusion and electrofusion equipment for the welding and jointing of plastic pipe used in the utilities, construction, and telecoms sectors.

As part of an improved test management strategy, the company is installing dedicated safety testing stations at each of its nine branches using sophisticated test technology that has been specifically designed for the hire, rental and service industries.

At the centre of the new MCA Fusion electrical safety testing protocol is the SafeCheck 8 tester, along with a label printer, bar code scanner, fault simulator unit and test beacon, that together provide a fully integrated and traceable 'test and tag' safety system.

The bench mounted SafeCheck 8 has built-in pre-configured tests for Class I, Class II and IEC extension lead/power cord testing to ensure compliance with the Hire Association of Europe code of practice and all other safety regulations.

The tester automatically sequences through earth bond, insulation, earth leakage, continuity and full function load tests to ensure that hire equipment continues to perform within original specifications.

MCA has recently expanded its product range to include products that also require flash testing as part of the testing procedure, and the SafeCheck 8 with its 1250V Class 1 and 2500V Class 2 test voltages is ideally suited for this task.

The new electrical testing programme is being introduced by MCA Fusion's Technical Director, Rod McCulloch. Rod said: "Our range of jointing equipment is used in many safety critical applications and it is imperative that it not only performs to the highest standards, but that our customers can have confidence that the equipment complies with all the necessary regulations.

"As part of our policy of adopting best practice standards in the hire industry, the new safety testing bays have been designed on a modular basis to ensure a consistent and high quality approach to testing across all of our branches.

"We are very grateful for the specialist advice and support provided by the Seaward hire sector team in creating a highly robust and traceable hire testing system that fulfils our unwavering commitment to meeting our safety obligations."

The MCA test protocol requires that all equipment is tested before being issued on hire, with the test stations also producing special test labels with details of the test results, equipment ID, date of test and a bar code ID for re-test purposes. Test data from the SafeCheck is also being integrated with the company's asset management software program to ensure a seamless record keeping system.

To help MCA achieve its aims, Seaward's specialist compliance testing team provided comprehensive onsite and offsite product support and technical guidance throughout the new test station specification, design and development process.

To ensure that the new installations meet the specific test requirements of the MCA product range, this has included technical demonstrations, help with software system amalgamation and the customisation of printed safety labelling.

Lee Warburton, Key Accounts Manager for Seaward Compliance and Precision products, said: "We've worked extremely closely with MCA to ensure that the new test stations completely match the safety testing needs of the business as a whole.

"The technical solution provided by the SafeCheck 8 kit not only meets the specific safety needs of the MCA equipment, but is also compatible with the company's administration and record keeping systems, which is essential in ensuring absolute consistency across the complete branch network."

The new test facilities are anticipated to be in place at all MCA Fusion Hire & Repair branches by the end of the year.

For more information visit:
www.seaward.com

Boiler Hire Short or Long Term You can't beat Byworth



Long Term

Long term hire can be a cost effective alternative to outright purchase.

- Capital outlay for new plant alleviated
- Maintenance and servicing costs included
- Plant designed and manufactured to suit exact needs

Unity - Byworth's unique remote monitoring system available

Short Term

When you need help in a hurry you can depend on Byworth for a rapid response. Temporary boilers provided for:

- Breakdown cover
- Cover for repairs and maintenance
- Urgent need for extra production capacity
- Short term projects and trials

Trust in the UK's leading industrial boiler hire company using the latest fuel efficient boilers, manufactured in our own factory. Byworth Hire gives total flexibility to cover any eventuality with full back-up support.



Byworth
BOILER HIRE

Tel: 01535 662599 | hire@byworth.co.uk | www.byworth.co.uk



EMSOnline
www.engineeringmaintenance.info

All of our articles are available to read online today!

VIEW FULL MAGAZINE ONLINE

- + Extra Articles and features
- + Full Business Directory
- + Much More...

Visit Us Today:
www.engineeringmaintenance.info

EMS
ENGINEERING MAINTENANCE SOLUTIONS



KING **BOILER HIRE SPECIALISTS**

The UK's largest provider of industrial Steam and Hot Water boiler plant.
Fast, efficient Nationwide service for planned or emergency cover, R & D projects or extra capacity.

- Steam boilers 150-15,880kg/hr
- Hot water boilers 30-8,000kW/hr
- Pressures from 7-17 bar
- Oil, gas or dual fuel
- Long or short term hire
- Full commissioning service
- 24/7 support

SALES • HIRE • EXPORT

+44 (0)1992 451629
www.kingsboilerhire.com

EDF selects BigChange to support Energy Solutions Delivery

BigChange, the mobile workforce management technology company, today announced that EDF has selected its pioneering JobWatch system to support the delivery of metering and energy services in the UK.

EDF's Energy Solutions division will use BigChange's JobWatch system to manage the activities of field engineers serving business customers. Jobs will be scheduled and automatically dispatched through JobWatch, with activities allocated to the most appropriate engineer after considering a range of factors including their location and skills.

Field engineers will be provided with their schedules, optimal routes, job information and worksheets through a BigChange app on their existing Android devices. With details of each job recorded on the app as it is completed, EDF's back-office team will gain a real-time view of their mobile workforce operations and how each job is progressing.

Tony Rabone, Senior Manager for Energy Solutions

Delivery at EDF, comments: "We are excited by the potential of BigChange's technology to improve our field service activities for commercial customers. This new way of working should allow us to be even more responsive to customer needs, while reducing the administrative burden of managing field operations and improving our employees' experience."

Martin Port, founder and CEO of BigChange, comments: "The ease with which JobWatch is deployed at scale and integrated into third-party ERP systems means BigChange is increasingly chosen by large organisations to replace legacy infrastructure and ways of working. We've invested heavily in innovation, integration and achieving ISO27001 information security accreditation to meet the demands of larger customers. We are thrilled that EDF



has rewarded these efforts by selecting JobWatch."

BigChange's pioneering mobile workforce and job management solution, JobWatch, provides organisations of any size with a paperless means of planning, managing, scheduling, and tracking their mobile workforce operations. It is used by 50,000 mobile workers and back-office personnel at over 1,500 organisations worldwide, primarily working in the construction, facilities management, field service, transport, logistics and waste management sectors.

For more information visit:
www.bigchange.com

BigChange Mobile Workforce Technology Boosts Productivity and Service for Balloo Hire

Balloo Hire, one of Ireland's leading tool and plant hire companies, has significantly reduced the resource required to manage its mobile operation whilst boosting customer service and minimising its environmental impact thanks to mobile workforce management technology from BigChange.

Balloo Hire to automatically plan, plot and share schedules with a driver's mobile device at the start of each shift. Changes or additional tasks can be instantly communicated, resulting in savings of around 40 working days per month.



BigChange has also made a real difference to Balloo Hire's customer interactions. Real time progress updates and delivery notifications are sent directly via email or text and automated POD gives customers greater visibility of their hired in equipment. The BigChange CRM functionality is also helping the Balloo Hire sales team personalise and inform customer interactions boosting service levels, giving a competitive edge and shaping the Balloo Hire future product range.

"Put simply BigChange has allowed us to do more with less!" continued Mark. "We've eliminated a huge amount of time-consuming admin work, reduced our paperwork production and saved miles with lower fuel bills and emissions. On top of this we are able to take on further logistic and delivery jobs, we can close sales more effectively and answer customer queries more efficiently."

With depots across Ireland offering an island wide delivery and service operation, Balloo Hire has saved hundreds of man hours per week scheduling planned deliveries and responding to ad-hoc requests since implementing the 5-in-1 cloud based BigChange solution. Using BigChange, Balloo Hire has also transformed its customer interactions with real-time updates and intelligence sharing, has achieved its goal of a paper free transport department and realised significant savings in fuel consumption.

"Before BigChange we had many long and tedious paper trails," commented Mark Grundy, General Manager at Balloo Hire Centres. "Each job could take up to 15 minutes to plan and allocate

which equated to at least 350 hours per week; a significant resource for any operation. In addition, changes to the schedule or ad-hoc request were difficult to manage as we had no visibility of or the ability to change drivers paperwork once they had left a depot."

Since implementing the JobWatch mobile app from BigChange, Balloo Hire has removed these paper trails, digitising many of its workflows. Part of an end to end cloud based solution, the JobWatch app replaces paperwork and synchronises in real-time with centralised management software. Providing a single platform CRM, Job Scheduling, Mobile App, Tracking and Customer Portal, the BigChange solution allows

The Balloo Hire team of around 50 mobile engineers and delivery drivers operates from depots in Bangor, Belfast, Lisburn, Ballyclare, Glenavy and Dublin. Driving a fleet of Scania trucks, Mercedes Sprinter and Ford Transit vans the team uses Samsung mobile devices to support the completion of more than 800 delivery and service call outs per week.

www.bigchange.com

SeaShield™ Systems Provide Long-Term Protection for Jetty Piles at Ullapool Harbour

In 2020, Shearwater Marine Services were awarded a contract to install protection for jetty piles at Ullapool Harbour in the Scottish Highlands, on behalf of The Ullapool Harbour Trust.

As consulting engineers on the project, Wallace Stone specified the use of SeaShield™ Systems supplied by Winn & Coales (Denso) Ltd to protect the jetty piles. SeaShield Systems have an extensive history of providing long-term corrosion protection to marine structures.

Shearwater Marine Services used a combination of the SeaShield 2000FD™ and SeaShield 70™ Systems on the piles and various supporting crossbeams on the structure.

SeaShield 2000FD consists of Denso Paste S105™, Denso Marine Piling Tape™ and an outer HDPE jacket, which is hydraulically tensioned before being secured with stainless steel fixings.

The SeaShield 70 System was used to protect the crossbeams and is an excellent option on areas where piles have obstructions. This system consists of Denso Paste S105™, Denso Profiling Mastic™, Denso Marine Piling Tape™ and Denso Glass Outerwrap 70™.



For more information visit:
denso.net

New Appointments to the Board at Winn & Coales (Denso) Ltd

On the 1st January 2021, the board of Directors of Winn & Coales (Denso) Ltd were delighted to announce three new appointments to the Board.

Mr Andrew Sweeney has joined Mr Chris Winn as Joint Managing Director of Winn & Coales (Denso) Ltd. Andrew qualified as a Chartered Accountant in South Africa and has held senior financial positions in multinational companies in various countries around the world. He joined Winn & Coales (Denso) Ltd in 2018 as Finance Director.

Mr Andrew Stuart has assumed the role of Sales & Marketing Director of Winn & Coales (Denso) Ltd. Andrew joined the company in 2015 as Export Sales Director and brings a wealth of knowledge to the role, having had 25 years' experience with

Denso South Africa working to develop their sales in not only South Africa, but also in the African export markets. Andrew has broad and extensive knowledge in the corrosion prevention industry and is responsible for UK sales and export sales in Europe, the Middle East and Asia.

Mr Ryan Darlow has been appointed as Production Director for Winn & Coales (Denso) Ltd. Ryan originates from Durban, South Africa and attended Rhodes University. After university, he joined his family-owned business Nine Kings

New Appointments to the Board of Directors at Winn & Coales (Denso) Ltd



Mr Andrew Sweeney



Mr Andrew Stuart



Mr Ryan Darlow

Engineering. Nine Kings worked closely with Denso South Africa, where they designed, manufactured and commissioned their production lines. In 2017, Ryan relocated to the UK where he started working as the Production Manager for Winn & Coales (Denso) Ltd.

For more information visit:
denso.net

TLV Euro Engineering Announces Expansion of UK Operations

In a move that will present fewer Brexit-related issues for its customers, increase its stock holding and strengthen ties with its parent company in Japan, steam solutions specialist TLV Euro Engineering has expanded its UK operations with the opening of a new 6,000 square feet warehousing facility in Cheltenham.

Commenting for TLV Euro Engineering, general manager Michael Povey says: "As we neared the end of 2020 it became clear that, whatever the outcome of a trade agreement between the UK and European Union, our customers would benefit more from the trade agreement reached between the UK and Japan.

"Until recently, we had partnered with our sister company in Germany but knew very early on that any trade agreement with the EU was going to present issues. However, we weren't willing for these issues to lead to increased prices for our customers so, as 31st December 2020 approached and we learned more about the proposed import/export processes

our plant in Germany would have to implement, we put our post-Brexit plan into action and forged ahead with plans to import stock directly from Japan."

TLV Euro Engineering has now formally entered into trading partnership with its parent company and manufacturing facility in Japan, a move that will see the company increase its stock holding of steam system solutions in the UK from £150,000 to £800,000 worth of stock.

The investment in its UK operations and near 450% increase in stock meant the company had to work tirelessly throughout the recent Christmas shutdown



to ensure its new facility – which offers a six-fold increase in capacity on its previous warehouse – was fully stocked, operational and despatching orders by the start of business in the New Year.

The new facility, which is located at Furlong Business Park in Bishops Cleeve, Cheltenham, is now fully-operational and holds over 1,000 steam system parts available ex-stock and, in many cases, for next-day delivery.

For further information, call TLV Euro Engineering on
+44 (0) 1242 227223,
email sales@tlv.co.uk
or visit www.tlv.co.uk.

Protect against the unknown

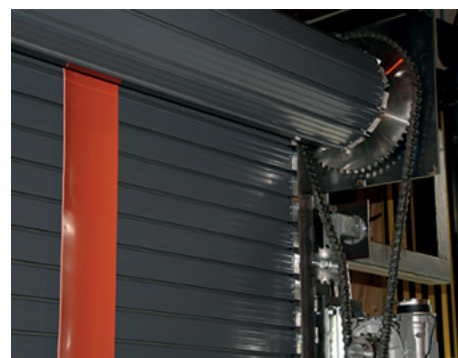
The impact of Covid is clear for all to see – escalating death tolls, Governments across the world striving to protect their populations and to keep their respective economies functioning against a background of considerable uncertainty.

"This is a heady cocktail. With already one year of controls and challenges across the business spectrum and with no clear end in sight, we also find the British terror threat is now at the severe level," says Nick Hart, managing director, Hart Door Systems. "Prudent businesses should therefore be considering a review of security issues across their property portfolios as a matter of urgency."

For many years Hart Doors has been at the forefront of the development of security roller shutters to protect property against fire and to protect against criminal elements. Further,

as a natural evolution of 'protection' Hart has developed the Typhoon shutter to protect property against exceptional weather such as hurricanes, cyclones and typhoons where wind speeds can range from 74 mph to 150 mph.

Under a general brand of security shutters Hart has developed fire shutters with up to four hours protection to its top of the range Terror Screen tested by the Loss Prevention Certification Board (LPCB) to being secure even after 20 minutes of sustained attack including the use of drills and hand tools, plenty of time in other words for on-site security to be alerted.



Mr Hart explains: "Terror Screen is our highest rated security shutter certified to LPS1175 SR1-SR4. It is a very heavy system which will provide significant resistance to attack. Drives, particularly on larger doors, will be chain driven as pictured. The shutters comply with BSEN 12453:2005, BSEN 12604:2000, BSEN 12635:2002, BSEN 12978:2003 and to LPS 1175 security rating which defines the resistance grade of a physical security product.

www.hartdoors.com
t: + 44 (0) 191 214 0404

Watchlog USB: a new range of USB Pressure Sensors and Software launched by Hydrotechnik UK

Hydrotechnik UK are pleased to announce their new USB Pressure sensor range with additional temperature output under the Watchlog brand name. The USB sensors are for use with their purpose-built monitoring and recording software for Windows which is supplied free of charge with each sensor.



Watchlog USB joins the growing Watchlog family of Bluetooth & Wireless sensor solutions. These are a new generation of USB Sensors that plug directly into any USB port or multi-ported hub for instant Pressure and Temperature measurement and recording. Data acquisition speeds are fully adjustable from as fast as 2ms up to every 10s.

At launch the Pressure ranges available from stock are: 0 - 25Bar, 0 - 160Bar, 0 - 400Bar, 0 - 700Bar. More ranges are available on a 4-6 week delivery.

All sensors also record temperature, although the sensing tip is not directly in contact with the fluid medium, so temperature changes are not as instantaneously measure in comparison to any pressure changes.

Advanced Software

Watchlog USB software is plug and play and is supplied free of charge with the purchase of any USB pressure sensor. The software recognises all sensors connected and auto-scales according to the highest value sensor connected.

Results are shown both graphically and numerically. The software is designed to be easy to use to view data, record tests, zoom into and pinpoint events. Export data as PDF, CSV files or into customisable report templates.

Main features:

- Graphical or numerical display of all connected sensors (Up to 8 connectable at one time)

- Min/Max values are retained during each test
- Easily zoom into graphs to pinpoint events
- Add annotations to graphs
- Export tests as PDF or CSV files
- Create Report Templates within the software
- Name each sensor and select a colour for graphs (this is remembered for the next connection)
- Easily set scan rates for dynamic high-speed testing or slower long-term testing.
- Set visual alarm levels for each sensor
- Easily start/stop tests manually or alternatively:
 - Schedule tests to start/stop (time, day, month)
- Advanced graph smoothing features to eliminate noisy or bouncy data
- All tests are stored on the software for viewing or manipulation later. Large tests can be split into smaller discreet files if required whilst maintaining the original test data

Periodic updates will be posted on the Hydrotechnik.co.uk website where necessary.

Watchlog USB is available now.

A new brochure and more information is available for download at www.hydrotechnik.co.uk/watchlog or a printed version on request from Hydrotechnik:
sales@hydrotechnik.co.uk
 01159 003550.

New Enerpac SafeT Torque Lock for Safer Hands-Free Bolting

Enerpac has introduced the SafeT Torque Lock, an innovative and user-friendly safety tool that transforms Enerpac square drive torque wrenches allowing hands-free bolting operation.



The SafeT Torque Lock improves worker safety by minimising exposure to pinch points and high-pressure hydraulic connections. It can also be used in any orientation including inverted positions, thus reducing the possibility of tool slippage and operator fatigue.

The SafeT Torque Lock converts Enerpac S-Series and RSQ-Series wrenches into a hands-free operation which grips securely to any hexagon nut in any orientation, including inverted. No additional tooling is required or loose components such as



reaction washers needed. The SafeT assemblies onto the torque wrench with one push of the square drive quick-release button for tightening or loosening. It works with heavy hex nuts that conform to ANSI B18.2.4 and has a max torque value of 5,000 N/m.

To find out more about Enerpac SafeT Torque Lock visit www.enerpac.com.

C.K Magma Launches its Exciting New Wheeled Rucksack Plus

Following the successful ongoing development of its award-winning wheeled tool case derivatives, C.K Magma has taken the logical step of expanding its popular rucksack range with the exciting addition of the Wheeled Rucksack Plus (MA2654).

This innovative lightweight and compact tool storage solution is ideal for tradespeople using public transport for travelling to their place of work, or for those who need to access places where climbing and a hands-free approach is needed.

C.K Magma's regular research and feedback from trade professionals has helped to evolve its tool storage range, which offers great insight into what works best to make tasks that much easier. This is evident with the continued evolution of its innovative wheeled tool case options, which provide the best quality and efficient portable tool storage solutions. With that in mind, the new Wheeled Rucksack Plus combines all the fantastic features of C.K Magma's rucksack tool storage, together with the advantage of a lightweight and durable wheeled chassis, with a telescopic handle for the easy and convenient transporting of tools.

The product's compact size and lightweight design, cleverly incorporates a whole host of other features and benefits including: A spacious main compartment; Vertical storage pockets for easy tool access; 39 pockets and holders including space in the base for larger tools; Extra comfort padding at the back with storable shoulder strap; Padded front storage pocket for iPad/Notepad, additional hand tools and documents; and a Removable Wheel cover to protect clothing.

Hardwearing, strong and durable, C.K Magma's wide range of cutting-edge tool storage products are built to protect and organise valuable toolkits, with great features and benefits designed to suit everyone's needs. The new C.K Magma Wheeled Rucksack Plus is no exception and is the perfect solution for professional tradespeople looking



for a quality mix of wheeled and hands-free on back carriage for easy and convenient tool transportation.

For more information call CKI customer service on 01758 704704 or visit www.carlkammerling.com

C.K Sure Drive Socket Sets Successfully Combining Strength with Durability

Leading brand C.K, offers a fantastic range of innovative tools, all engineered to offer great performance, durability, and strength.

The new C.K Sure Drive Socket Sets are no exception and successfully combine high quality with high performance, manufactured from forged chrome vanadium alloy steel, making each part resistant to rust, as well as providing excellent longevity. Each set features the patented Sure Drive System which applies torque evenly to the flats of the nut, alleviating the risk of rounding-off.

Three new Sets are available within the range and include:

- (T4660) 1/4" 36pc Socket and Bits Set.
- (T4661) 3/8" 23 pc Socket Set.
- (T4662) 1/2" 24 pc Socket Set.

Great Features and Benefits

The C.K Sure Drive Socket Sets offer some great features and benefits, including: 6 and 12 point Sure Drive sockets, which apply torque to the flats of the nut, rather than the corners, to avoid rounding-off; available as 1/4" 3/8" and 1/2" standard sizes; 72 fine-tooth ratchet drive for precision adjustment and restricted access operation.

These quality C.K Sure Drive Socket Sets also come supplied with a durable case with custom inlay, and a robust clip fastener for secure tool storage.



The new C.K Sure Drive Socket Sets have broad appeal and are ideal for tradespeople and DIY enthusiasts alike.

Find out more by calling CKI sales on 01758 704704, or visit www.carlkammerling.com.

Hart and Food: Squeaky clean!

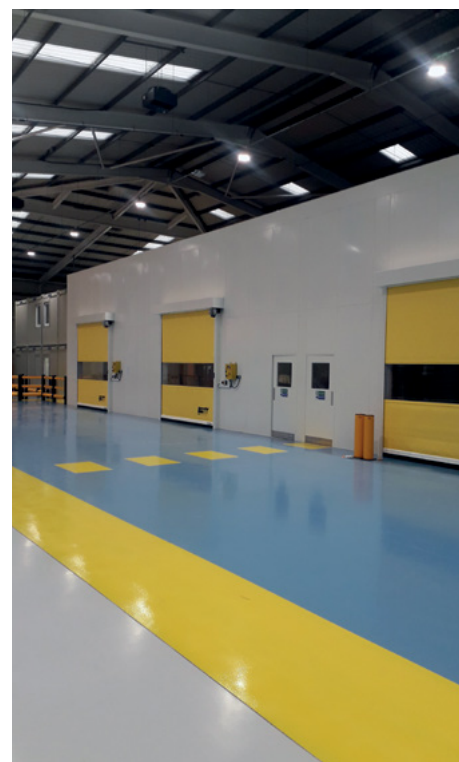
Hart's association with many major manufacturing sectors through its wide range of door products is widely acknowledged. One sector includes the UK's biggest sector, the £100 bn Food and Drink industry which employs over 4m people.

"We have supplied Speedors to protect production facilities, the delivery areas for raw materials to the dispatch of final products. The issues are many and varied – environmental, security and cleanliness for example, all of which are important factors when choosing doors," says Melanie Rosby, Hart's marketing manager.

"Hart has specifically developed the Speedor Cleanroom door to suit food markets and white wall environments, with wash down guides, stainless steel options, variable air leakage requirements, non-touch safety light curtain and high-speed operation."

The food production sector requires high standards of door systems to ensure air quality is not compromised. Speedor Cleanroom is an effective and fast-acting door for both goods-in and goods out parts of a typical plant involved in the production process. The whole Speedor range has a part to play with Speedor Mini for example being used on production lines, cold rooms and food preparation areas.

Through its innovative engineering Hart offers the food industry bespoke door systems including prototyping, testing and third part certification. Apart from cleanliness, Hart also aids energy conservation, fire prevention and security."



www.hartdoors.com
t: + 44 (0) 191 214 0404

Flexicon protects circuit integrity with unique Connectabox™ circular junction box

Flexible conduit systems manufacturer, Flexicon has launched Connectabox™, a weatherproof, IP68/IP69 circular connection box. It provides a faster and simpler way to interconnect circuits and wiring assemblies, while offering superior cable protection for external environments.

Connectabox™ has been designed to protect safety and performance-critical cabling and simplify cable management. The 110mm, round junction box offers a wide range of features to make installation simpler and faster.

In contrast to conventional enclosures, which utilise knockouts or require drilling, Connectabox™ features four easy-to-connect entry points as standard. These provide quick access and termination for different sizes and types of flexible conduit, from 16mm up to 34 mm, using Flexicon Ultra (FPAU) push fit connectors.

Significant time savings on the job are realised with the intelligent push, twist and lock connector system with integral seals. Contractors can make a reliable connection in seconds, without having to remove knockouts, drill holes, fit locknuts or even torque tighten any components.

Flexicon's design engineers have incorporated many innovations to increase the available wiring space inside the connection box. The cleverly designed two-part lid is also available with an extended lid version, for applications requiring even more internal wiring space or where more box depth is required.

The Flexicon Ultra (FPAU) push-fit conduit fittings are installed without the need of a protruding thread or locknut to secure, thus maximising internal space even further. There is also no need for any tools or torque tightening, as the fittings lock and secure into place with a simple twist forming a watertight seal.

The push-fit connection to the box is universal, thus installers can match the fitting with the desired size of conduit necessary for any outlet. If in the future the wiring installation needs to change, to extend circuits or add cables, this can be done with ease, thus futureproofing the installation.

Connectabox™ is compatible with a range of accessories, including internal mounting plates, and is suitable for use with DIN rails allowing terminal blocks and components to be configured neatly and quickly.

The lid can be tethered to the base using a lanyard, making it ideal when working at height as there are less components to hold during installation. The screw lid is secured without the need for any tools and is tightened by rotating. A securing clip offers anti-vibration performance ensuring enclosure integrity is maintained wherever the box is mounted. Access can be further restricted using a tamper proof seal if necessary.

The non-metallic IP66, IP67, IP68 and IP69 box is manufactured in modified Nylon PA6 glass reinforced material, offering high impact strength with superior levels of ingress protection without the need for gels or additional seals. It is UV resistant and ideal for external use.

Connectabox™ offers a truly weatherproof solution that is lighter weight than conventional metallic enclosures, with no risk of corrosion



or degradation due to exposure to water or liquids. The material construction also offers low fire hazard properties, making it suitable for environments where public safety is paramount, including EN 45545 HL3 rail fire safety compliance.

For external applications or environments which are exposed to harsh conditions, Connectabox™ offers a reliable, fast and practical solution where routine maintenance may be more difficult. This is especially the case if the box is mounted at height or in a remote location, and where the reduction in downtime is critical, such as in the rail, telecommunications, water treatment and renewables industries.

Connectabox™ offers a true fit and forget solution where critical cabling needs protection for now and the future. To see more information on the features and benefits of Connectabox™ visit the Flexicon YouTube channel and watch the video <https://youtu.be/cetzHVKjr5k>, or visit the interactive online viewer to see the product in 3D at www.flexicon.uk.com

If you would like to see a demonstration or sample product, contact flexiconsales@atkore.com.

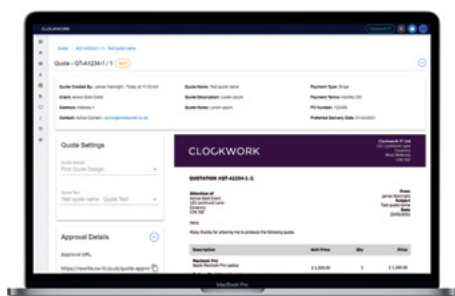
For further information about Flexicon contact Flexicon Ltd, Roman Way, Coleshill, Birmingham, B46 1HG. Email flexiconsales@atkore.com. www.flexicon.uk.com.

New Service Management Release from Clockwork for 2021

Clockwork IT, who have been developing software for the Service Management Sector for over 20 years, have announced the latest software release for their 'coming out of COVID-19' April launch of Version 21.

With many years' experience in the sector and thousands of users in the Service Management arena, version 20 builds on the 'end to end' solution that Clockwork have offered, covering the business process from quote to invoice and payment, including contracts, planned maintenance, scheduling, mobile applications, forms capture, job completion to invoice and financial integration. At a cost of less than £1.50 per day, the Return On Investment is obvious;

New Quoting Features



New Templates

Choose from new, flexible quote layouts to vary your quote style dependant on quote type. Change mid quote or after printing.

Trace the Quote

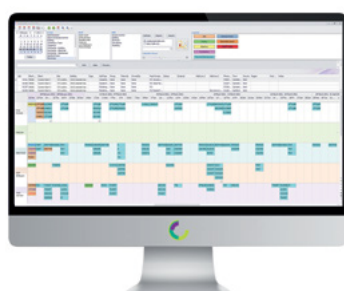
Save your quote to the cloud for your Customer to open via their email link and be notified the moment they open it for review.



E-sign without the cost

Built in electronic signature management replaces the cost of Adobe Sign or DocuSign by allowing the client to quickly accept your quote and you are immediately notified of the action via email.

Enhanced Scheduler Features



As well as the current ability to schedule project work, planned and reactive maintenance, the new Scheduler release opens up the ability to manage Holiday Requests and manage them against holiday allowances in the HR file. Create unlimited work types and colour code them to your own preference with to easily identify the types and loading. Easily attach multiple Resources to a task or part of a project and report back on expected v actual time spent.

New Mobile Release Features



In these fluid and challenging times, Clockwork have released the new Form Builder version allowing you to design and link specific forms to job types and have them appear in the next synch with the Clockwork mobile app. Manage the flow within the form with dependency logic to make items appear or disappear as the user flows through the forms. Grab readings and set tolerance alerts for non-compliance. Grab photos, signatures, add new jobs, place on hold, add consumable costs to a job and collect time sheet data directly and accurately. Lone Worker module will also ensure you monitor the wellbeing of your staff when working alone on site.

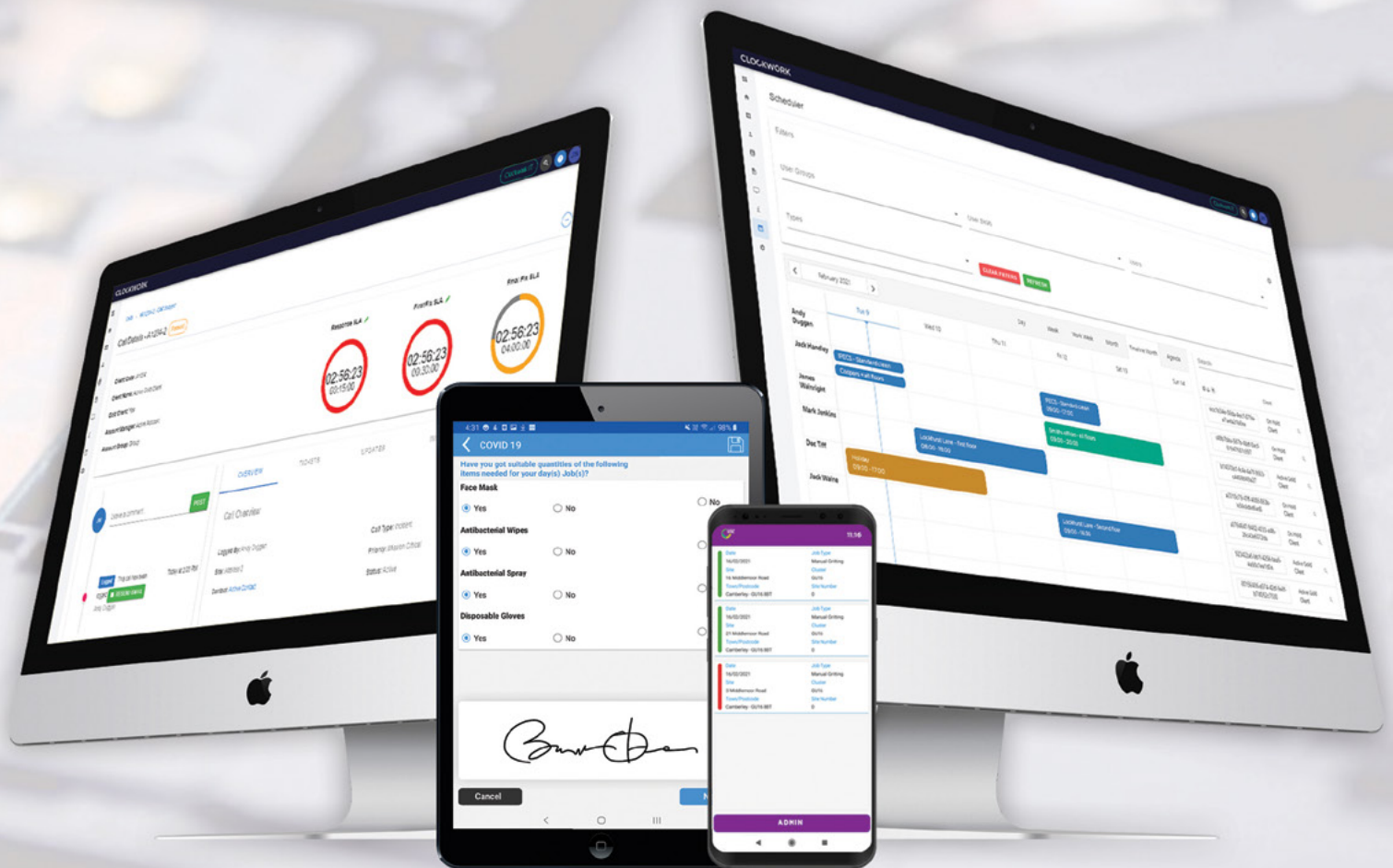
Financial Integration

Version 21 sees even more integration with Sage, Xero, QuickBooks and SAP with push and pull features into sales ledger and purchase ledger as well as order processing from external systems, automatically creating Jobs within Clockwork 21 through enhanced API functions.

The new beginning is here and Clockwork want to place you ahead of your competitors by coming out of the gates with greater efficiency and the software systems your Customers are looking for when selecting preferred Suppliers.

Contact Clockwork today on 03300 577 170 for a free demonstration.

Do you need your business to run like Clockwork?



Contact us

T: 03300 577170

E: Sales@clockworkit.co.uk

W: www.clockworkit.co.uk



Brand new: myARI

Your service and information portal



 **myARI**

Your portal

 **myValve[®]**

Now available online

 **myPREMIO**

The actuator app

 **ARI-ID**

Product information

ARI-Armaturen UK Ltd. is excited to announce the introduction of our new ARI Digital Services which include:

- **myARI**
Your portal - your service and information portal
- **myValve**
Your valve sizing program, now available online
- **myPREMIO**
The actuator App - the new app for electronic actuators
- **ARI-ID**
Digital product information

myARI – The new customer portal myARI is a modern service and information channel which you can access 24/7. It provides a quick, easy & convenient way to check your order or delivery status at any time. You can additionally use **myARI** to notify us of repairs, returns or complaints. Please contact our UK Sales office if you have any questions or would like more information about registering with **myARI** or even the valve range that we offer.

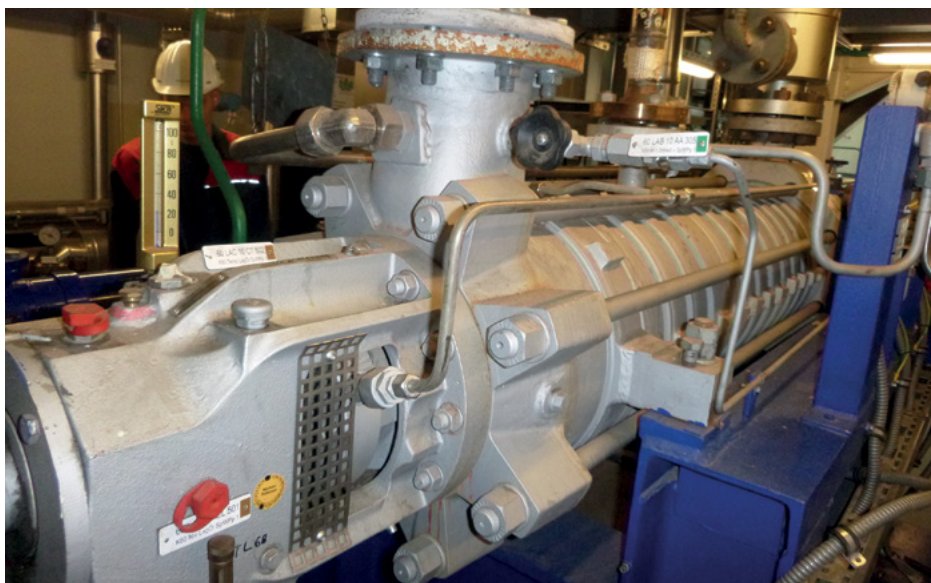
Contact the UK sales office on **01684 275752**
or Email: inquiries@uk.ari-armaturen.com



www.ari-armaturen.com

Punctual Pump Maintenance Thanks To Sulzer Service Network

Complex maintenance project completed successfully and on time



A manufacturer within the German automotive sector has a modern combined heat and power plant that supplies its own facilities as well as large areas of the nearby town. A short lead time was therefore an important aspect when putting routine pump maintenance out to tender. Not only was Sulzer able to offer the earliest completion date, but it also met the deadline and to the full satisfaction of the customer – in spite of unforeseen challenges during the performance of the project.

Ten years ago, during the comprehensive modernization of the power plant, the highly efficient combined cycle gas turbine (CCGT) plant was constructed. This supplies the power plant with electricity (approximately 70% of the demand) and heat as well as space heating by means of cogeneration. The natural gas-fired power plant also supplies a large part of the district heating requirement for the nearby town.

The central components of the plant include feed water pumps, which supply water to the steam generators at the power plant. As the reliability and availability of the pump groups are essential for the operation of the power plant, the CCGT plant has a total of three of these pumps available. While two of them are in operation, one is held in reserve so that in the event of a breakdown, the downtime of the

power plant is kept to a minimum.

These important components were due to undergo maintenance for the first time in autumn 2019. In the interest of operational safety, the plant wanted to avoid being without the back-up pump any longer than absolutely necessary and therefore a short lead time was of paramount importance. After careful consideration of the competitive bids, the contract was awarded to Sulzer, an industrial maintenance provider renowned for its expertise in the field of rotating machinery.

Efficient project management

The project included the maintenance of the whole pump group consisting of the centrifugal pump, its drive motor and the connecting variable-speed coupling that controls the pump speed. All three components are made by different manufacturers. While the motor was being inspected, the Sulzer service center in Neuss overhauled the pump. The variable-speed coupling was sent to the facility in Schkopau, which specializes in the maintenance of gears and couplings.

As part of the standard maintenance programme, the condition of all three components was assessed and wearing parts were replaced. In the case of the variable-speed coupling, one component had

to be replaced on the drive side, while a magnetic particle test certified the integrity of the remaining parts.

Overcoming challenges successfully

"Even the individual measures from the standard maintenance programme require the expert organization and coordination of logistics, capacities and resources", says Andreas Holzajt, Sales Engineer at the Neuss Service Center. "What's more, Sulzer's extensive network of facilities means that we are able to offer a turnkey solution to match the customer's schedule."

In this case, due to entrained dirt particles and air bubbles in the water, the pump is exposed to higher loads than the other components. The inspection made after dismantling and cleaning during the assessment found a shaft heavily damaged by scoring and a destroyed impeller. Sulzer completed the reconstruction of the shaft and the replacement impeller was obtained from the original equipment manufacturer (OEM), enabling the rest of the overhaul to continue without interruption.

Necessary resources provided

The remaining repairs could be carried out as required at the service center. These activities were performed by the in-house mechanical production facility and included reworking the wear rings, producing new gauge rings for connection to these with an interference fit, producing a new throttling bush and reworking an impeller hub.

The project was completed on time in around two months and the maintenance of the second pump is scheduled to take place this year. "The customer was extremely satisfied with the handling of the project and found Sulzer to be a reliable partner", says Holzajt. "When the time comes, the second of the three pumps due for maintenance will also be swiftly overhauled to guarantee continued operational safety at the power plant and thus a reliable supply of electricity for the plant as well as district heating."

www.sulzer.com



Supplying quality products & service since 1975



www.dualpumps.co.uk

Call 01664 567226 for more information

Eaton's new CMT mobile valve section increases design flexibility and reduces valve bank size with two-service control capability

CMT expands the CMA advanced mobile valve family

The power management company Eaton has announced the launch of the CMT mobile valve section, a streamlined new section option for the CMA advanced mobile valve. With the capability to control two bidirectional services from one section – an industry first – the CMT valve section increases design flexibility and reduces CMA valve bank size, weight and overall system cost.

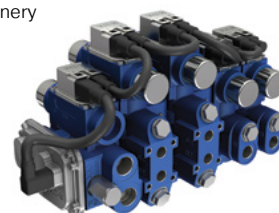
Like the existing CMA mobile valve section, the new CMT section is software-configurable and features CAN communication, on-board sensors, digital flow-sharing and electronic load-sensing to provide precise flow control and high responsiveness. While the CMA section features independent metering, the CMT section utilises the twin-spool architecture to control two services instead of one. This can reduce the total number of sections needed in a valve bank by as much as 50 per cent, minimising valve-bank size and weight.

CMT mobile valve sections are stackable with CMA sections, which increases the design flexibility of the CMA advanced mobile valve. Original equipment manufacturers (OEMs) can optimise the valve for all vehicle requirements by specifying sophisticated CMA sections for services that demand superior precision and control and streamlined CMT sections for standard machine functions. The availability of two stackable section options simplifies the use of the CMA valve on high-end and mid-range machines without parts proliferation, due to shared components and procedures.

"The new CMT mobile valve section reduces overall system cost without sacrificing performance," says Jiri Foukner, EMEA Product Manager, Advanced Mobile Valves, Eaton. "OEMs can merge the next-generation performance of CMA sections with value-oriented CMT sections to create the optimal valve solution

for new mobile machinery designs."

The CMA advanced mobile valve significantly improves machine performance and operator productivity. Featuring on-board electronics and sophisticated software algorithms, the CMA valve can optimise for conditions such as oscillation and vibration to deliver better stability, controllability and fuel efficiency. The software-driven set-up eliminates hardware replacements and enables performance optimisation in minutes instead of months, speeding time to market.



To learn more about the CMA advanced mobile valve and CMT mobile valve section, visit Eaton.com/CMA and Eaton.com/CMT.

New Siemens actuator line for PICV valves operates as quiet, connected multitasker

Siemens Smart Infrastructure has upgraded its range of SSA actuators for small PICV valves by adding new features for more energy efficient and versatile hydronic room applications.



The updated SSA actuators now offer more flexibility due to their broad control possibilities - from analog control to KNX communication capabilities for room solutions and fast integration into connected systems. While using the same cable for communication and power, the customer saves time and cost. Thanks to the operating mode 'nightmode', the actuators are more silent than ever, with less than 28 dB. This makes them ideal for use in noise-sensitive areas, such as hotels, recording studios, meeting rooms and libraries.

Simplified installation, fast commissioning

As the cold season has arrived and people spend more time indoors, heating needs to be

efficiently controlled. The updated SSA actuators are well-suited to meet this demand with ease of installation and operation. All new actuators are delivered pre-configured and are ready for immediate installation. The newly introduced IP54 protection rating enables all installation directions, including overhead installations, for greater versatility. The new LED status display on the SSA actuators ensures fast and error-free commissioning. It shows the position of the valve and different operating states, while helping users with various functions, such as self-calibration. The latter is particularly important in the event of power failure, where proper operation can be restored without technical support or manual intervention. This allows building occupants a comfortable stay without interruptions. In addition, self-calibration offers automatic stem end position

recognition and ensures that the actuator always fits the valve correctly which leads to precise regulation and energy savings.

High-class features for more applications

With new functionalities such as feedback signal and the possibility of switching to manual mode, operation has never been easier, time saving and cost efficient for the user. Thanks to manual operation or override, testing of valves and actuators is simple as the system does not have to run at all. Even emergency operation is possible in manual mode. But the major benefit for users lies in the newly added KNX communication capability of the SSA actuators. This enables the user application possibilities with room thermostats, as well as room applications with room automation stations or easy connection with control units. The updated SSA actuators reduce the need for wiring and effort, as one and the same cable can be used for communication and power, allowing optimized workflows. Thanks to two digital inputs, window contact, presence detector or condensation sensor can be connected, which leads to further wiring reduction, cost savings and also saves inputs/outputs on the controller.

For more information on Siemens Smart Infrastructure, see:
www.siemens.com/smart-infrastructure

Replacement Ink & Glue Transfer Pumps significantly reduce Tissue Paper Manufacturers downtime with Payback of only 6 months



Adhesive Types, Background & Application

Careful consideration must be taken with pump selection when handling the transfer of glues. Depending on the type, they can be highly viscous as well as harden and solidify when exposed to air. Glues are typically either water based or solvent based, in this instance the former is relevant.

PVA is a common example of water-based glue, natural or synthetic soluble polymers are added to water to form the liquid, this type of product only works if the applied surface is permeable, for example wood and paper. The glue sets once the water has evaporated from the surface, the bond can then be broken easily by the reapplication of water, these glues are popular as they are low cost and friendly to the environment.

Process Background

An existing customer - a World-renowned paper tissue manufacturer was having difficulty with their existing pumps used for the transfer of a glue/ink mixture used for various processes in their manufacturing plant. They previously purchased a peristaltic pump from us for an ink application and

were so impressed with the quality, efficiency and ease of maintaining that they wanted to replace other pumps currently installed with the same technology.

They have a large holding tank containing the mixture, with smaller day tanks located throughout the plant next to different machinery dependant on the process. The purpose of the unit is to fill the smaller tanks on demand and to ensure they never fall below a minimum level that could cause a stop in production. We were informed that 1 hour of downtime is equal to around £3000 of lost revenue, therefore it is crucial that the solution selected was reliable and quick to maintain if a fault occurs.

Process Requirements

The average flow rate required to meet demand is 500L/hr, however the production manager wanted the ability to increase flow up to 900L/hr if demand increased, an ability they did not previously have. The glue mix is viscous therefore the pumps needed to be capable of handling the high viscosity while self-priming from the feed tank. The capability to clean the pumps easily was also a must as it is crucial to avoid the product setting within the unit after production has completed.

Our Non Clogging, Low Maintenance Solution

Peristaltic glue pumps cover all the customers requirements, their ability to self-prime, transfer high viscosity fluids and the seal-less design make them an excellent choice. The only component that encounters the fluid is the internal rubber hose, this is easily cleaned by flushing through warm water after demand has finished.

The absence of a mechanical seal, balls and valves found in other pump designs ensures the pump does not become clogged, the ability to reverse the flow is also an excellent feature if somehow this does occur. As hose pumps can dry run indefinitely, it

allows all the product to be emptied completely from the hose without worry of causing damage like in mechanically sealed designs.

We supplied 2 peristaltic hose pumps complete with built-in variable speed drive, this allows the customer to easily alter the flow rate by simply rotating a potentiometer dial located on the motor. Having the inverter directly mounted on to the motor negates the need to install an external local inverter, something that this customer wanted to avoid.

In addition to the inverter, we installed various other features to make life as simple and safe as possible for the operators. We included an emergency stop button on the motor so that the glue pump can be stopped without having to reach a control panel, also included is a reverse switch to allow flow to be reversed if required, for example if too much product has been transferred or a blockage occurs. The final feature is a hose leakage detector, this sensor detects if the internal hose has ruptured, it sends a signal to the control panel to warn the operator. This allows the fault to be detected early and for maintenance to be performed quickly before there is a loss in production, downtime is then minimised and ultimately costs are saved.

To further assist the customer and to ensure any possible downtime is reduced, we supplied a spare hose and lubricant. As the hose is the only wearing part, the number of spare parts required on site is very low, simply replacing the hose and applying the grease is all that is required to get the pumps operational again after a rupture.

If you are experiencing issues with pump maintenance taking longer than is necessary, frequent downtime or experiencing pump clogging, contact us to see if we can help.
www.northridgepumps.com

Agadir-Chtouka desalination plant strikes gold with tailored compressor solution

Abengoa, a major multi-national infrastructure company working in the energy and water sectors, has contracted Ingersoll Rand's Engineering Project Solutions team to design a tailored compressed air system for the Agadir-Chtouka desalination plant in Morocco, with the latest CompAir technology providing the perfect solution.

Water plants depend on high-quality instrument air and service air to be exceptionally clean and free of contaminants such as moisture and particles. The Agadir-Chtouka desalination plant required instrument air to power pneumatic equipment, valves and some electrical controls, as well as service air for the industrial processes at the facility, including seawater intake, the re-distribution of salt to the sea, storing drinking water in tanks, and cleaning these tanks too.

As a result, the Agadir-Chtouka desalination plant needed a reliable, solutions-driven compressed air partner. Furthermore, the site needed a specialist with a proven track record of meeting the industrial air demands of large-scale engineering projects in areas with challenging environmental conditions, like the deserts of the Souss-Massa region where the new plant would be constructed.

Abengoa signed contracts to develop a desalination and irrigation project in the Agadir region in 2017. Valued at €309 million and due to come into service in March 2021, the plant will

have an initial production capacity of 275,000m³ of desalinated water every day, with a maximum capacity of 450,000m³ expected. The plant will be accompanied by reservoirs for storing drinking water, at least five pumping stations, 22km of pipelines and a distribution network of 490km. At least 150,000m³ of water will be transported daily to Greater Agadir, delivering drinking water to 2.3 million people in the region of Souss-Massa, and then part of the water treated by reverse osmosis will also be used to irrigate 15,000 hectares in the Chtouka Ait Baha region. The facility will be the largest seawater desalination plant in Africa.

To meet the demands of the harsh desert environment, Ingersoll Rand's engineers designed a customised enclosure for the entire system, which covers compressors, dryers, filters, pipework and its PLC system. Measuring just ten metres long, the container provides vital protection against the ambient conditions of the desert environment, while also incorporating air ducts to deliver the necessary ventilation that the equipment needs to operate as expected.

The customer also required a special gold colour coating for the enclosure, in order for it to blend in with its surroundings.

In total, two oil-lubricated rotary screw compressors and two refrigeration dryers were supplied from CompAir, as well as various other downstream parts, including filters and tanks. Full service and maintenance contracts have also been supplied by Ingersoll Rand, together with a two-year spare parts package and an extended warranty period.

Lucia Morote, Project Manager for the Engineering Project Solutions team at Ingersoll Rand, explains: "Having an exclusive project management team for EPC projects helps us create a strategic value chain that gives companies an edge on their competitors, particularly in complex contracts and special applications. This is also a benefit for EPC contractors. Being able to deliver projects on time and without extra costs often determines whether a company will be awarded a project."

To find out more about Ingersoll Rand's engineering project solutions, please visit www.gardnerdenver.com/engineering-project-solutions



Stay Up To Date!!!

Follow Us On Twitter

@EngMaintSol



New Year - New Compressed Air Skills

British Compressed Air Society offers 25 per cent off all training courses for customers of BCAS members

The British Compressed Air Society (BCAS) is offering all end-user customers of BCAS members an exclusive 25 per cent discount on its full range of CPD-approved training courses.



Announced to celebrate the launch of the Society's new e-learning portal (e-learning.bcas.org.uk), the offer also includes free, associate membership of BCAS for each customer (excluding trade customers). This provides a host of additional benefits, such as discounted publications, as well as access to compressed air guidelines and the society's social events.

To benefit from the offer, end-users should simply contact their supplying BCAS member, who will provide a unique booking code. This code can then be used to redeem the 25% discount off the complete range of e-Learning and blended learning training courses available.

Details of all BCAS members can also be found on the Society's website at www.bcas.org.uk/directory.

BCAS has long been recognised as a provider of training and development for engineers, technical professionals and users of compressed air. It offers a wide range of specialist courses that are tailored to the needs of industry, combining safe working practices, with specific guidance on all aspects of compressed air performance.

These include specialist eLearning courses, which provide practical training for compressed air and vacuum users, alongside a host of health and safety tutorials, with popular courses including :

- Certificate in working safely with compressed air (WSWCA)
- Certificate in compressed air treatment technology (CATT)
- Certificate in compressed air system technology (CAST)

- An employee certificate in maintaining a Covid-19 secure workplace

Blended learning courses combine online tutorials and training with guided learning and assessment by a BCAS qualified tutor. This helps delegates to learn at a time and place to suit, combining at-home study with invigilated examination. Courses include:

- Certificate in understanding the Pressure Systems' Safety Regulations (PSSR)
- Certificate in understanding ISO8573
- Diploma in Compressed Air Management (DipCam)

Vanda Jones, BCAS Executive Director adds:

"The start of a new year is always a good time for companies to consider their training requirements and help their staff to brush up on their skills! With home and remote working now making it more challenging to organise face-to-face training for every requirement, we are delighted to launch our new eLearning portal, helping engineers, compressed air users and industry professionals to learn at a pace - and from a place - that suits.

"Add to this the exclusive 25 per cent discount available to all our members' customers, and there really has never been a better time to train."

Visit e-learning.bcas.org.uk/ to search the full range of courses. For further information, contact your local BCAS member, email training@bcas.org.uk or call 0207 935 2464.

Let Hi-Kleen Do The Dirty Work

With the UK continuing its battle against COVID-19, businesses everywhere are facing the unenviable task of ensuring virus-free workplaces for staff and customers alike.



HI-KLEEN does not stain, is non-corrosive and will leave a streak and smear-free finish to most polished surfaces, including glass and stainless steel. The product contains no alcohol, avoiding any potential for dry or irritable skin.

Composed of organic, non-chlorinated solvents, HI-KLEEN comes in both 500ml aerosols and disposable 17kg canisters (with spray gun). The latter is ideal for those looking to sanitise entire rooms, providing typical coverage of 750 square metres.

Hi-line is offering a free, no-obligation demonstration of HI-KLEEN at the premises of interested parties.

As a further point of note, the company will supply a free HI-KLEEN aerosol spray with each purchase of Hi-line's compressed air equipment during 2021. Hi-line has had an exceptionally busy period since the onset of COVID-19 and expects this to continue moving forward. In particular, the company has provided essential help to the NHS by supplying medical gas dryers for hospitals, including the new NHS Nightingale facilities.

For this reason, HI-KLEEN from Hi-line Industries has been proving exceptionally popular since its introduction in the summer of 2020. To help even more companies benefit from this highly effective surface sanitiser for commercial premises, Hi-line has produced a short but highly informative YouTube video (<https://youtu.be/7cQlavJ51S4>) that demonstrates the product's easy application.

Despite the gradual roll-out of a vaccine for COVID-19, the Government advice is to remain vigilant and continue following the guidance set out at the beginning of the pandemic. The virus is still growing in prevalence throughout the UK. Workplaces are a potential breeding ground for bacteria and viruses, which is why taking sensible precautions represents an astute health and safety strategy.

A single, quick application of HI-KLEEN ensures full sanitisation of all contact surfaces, providing at least five hours of protection from further contamination once applied. The product is completely safe for any member of staff to apply without need for PPE.

HI-KLEEN's special formulation ensures it kills and inhibits both bacteria and viruses (including enveloped viruses such as COVID-19) on hard or soft surfaces. This odour-free, clear product is ideal for a vast range of facilities, including factories, food plants, warehouses, offices, showrooms, sports clubs, conference centres, hospitals, health centres, care homes, educational buildings, theatres, cinemas, restaurants, pubs, and even vehicles.

Further information is available from:
Hi-line Industries Ltd,
Visit: www.hilineindustries.com



Ultimo announces UK partnership with DNASTREAM

Ultimo Software Solutions has announced that DNASTREAM, the IT consulting organisation, will operate as its UK implementation partner. DNASTREAM will focus on the manufacturing and utilities sectors, supporting businesses by driving the more efficient use of assets, enabled by Ultimo's Enterprise Asset Management software.

Ultimo and DNASTREAM have been working together since 2018 and are now expanding their collaboration as a first step in Ultimo's expansion of its international partner strategy. DNASTREAM offers the Ultimo portfolio as part of its extensive range of IT solutions. The business is fully equipped to advise customers on their asset management issues and support any implementation process.

According to Marcel Leeflang, Head of Channel Sales at Ultimo, "This strategic partnership fits into our vision of serving our customers in the UK in the best possible way. In 2021, we will be focusing on

further expanding our partner channel in Western Europe. This collaboration with DNASTREAM is a great example as we further develop the number of international implementations.

DNASTREAM brings us its local knowledge and extensive experience in asset and maintenance process optimisation. This experience is vital for realising successful customer projects. In the Netherlands, we already help hundreds of companies improve the uptime of their machines and factories and increase the efficiency of their maintenance. In the UK, we have been doing the same for a number of larger customers

such as Gatwick Airport and the environmental services provider Urbaser. We are looking forward to helping other companies optimise the management of their assets, together with DNASTREAM."

Andy Milner, Managing Director of DNASTREAM, is also excited about this new step. "I am delighted that DNASTREAM has been selected to become the first UK Partner for Ultimo. We are looking forward to helping our customers establish best-in-class asset management and maintenance processes, supported by our own Ultimo certified consultants. Ultimo is an excellent and flexible cloud EAM system that is a great fit for current market demands."

For more information visit
www.ultimo.com

Optimize Your Facilities with CloudApper!

Managing any building or facility requires significant commitment and resources from facility management teams.



Each operational department has its own unique and complicated requirements to ensure functionality. However, as assets and equipment are the primary objectives of facilities management, CloudApper can simplify your task and guide you through the process of what it is you or your team needs to accomplish.

Properly managed facilities are keys to ensure cost-efficiency, create happier workplaces, and reduce their environmental impact. By utilizing software technology and the internet, CloudApper can simplify complicated maintenance tasks into systematic and manageable chunks to improve the quality of life of people and the productivity of your core business.

CloudApper is now offering an all-in-one “Facility Management” bundle package. The bundle includes three different applications - Facilities (facility management software), CMMS

(computerized maintenance management system), and Safety (workplace safety management software) at the price of one.

With this bundle, in addition to streamlined maintenance scheduling, work requests, and better control of your inventory, you can also ensure compliance with workplace safety regulations, such as OSHA to establish a safer work environment while eliminating the administrative burden.

CloudApper’s goal is to consolidate all the business tools and enable you to streamline tasks (especially smartphones) to help you achieve true digital transformation at an affordable cost.

Who can use our solution?

- Manufacturing & Energy Plants
- Oil, Gas, & Mining Facilities

- Healthcare Facilities
- Construction & Real-Estate
- School, Colleges, and Universities
- Ports

This cloud-based bundle solution comes with all the necessary features and modules needed to streamline all maintenance operations. Few core features include:

- Preventative maintenance
- Asset management
- Inventory management
- Vendor management
- Facility monitoring - Access to real-time facility data
- Incident management
- Audit management
- Bar code reader and scanner
- Training management
- Robust reporting tools

Benefits of subscription:

- The bundle at the price of a single solution
- Access to all other CloudApper business automation tools without any extra fees
- Dedicated 24/7 support and training
- All solutions come with web and native mobile applications for both Android and iOS.

Improve productivity by allowing employees to perform tasks quickly. Get in touch with CloudApper for a quick demo:
<https://www.cloudapper.com/>
info@cloudapper.com

Senseye Partners with PTC to Accelerate Predictive Maintenance Technology Adoption

Senseye, the Machine Health Management company, today announced a collaboration with PTC (NASDAQ: PTC) to make Senseye's predictive maintenance software suite (Senseye PdM) available to users of PTC's ThingWorx® Industrial IoT (IIoT) Solutions Platform.

Senseye PdM can connect to the ThingWorx ecosystem, allowing users to monitor assets automatically and even anticipate future machine failures by applying Senseye's proprietary algorithms and AI technology.

Senseye's specialized software for predictive maintenance is trusted by Fortune 500 industrial organizations globally as part of digital transformation initiatives. It provides users with new sources of competitive advantage by reducing unplanned downtime, spare parts

inventory, and maintenance expenditure.

Global manufacturers across a range of industries have halved their levels of unplanned downtime and achieved reductions in maintenance costs of up to 40 per cent using Senseye PdM.

Simon Kampa, Chief Executive Officer of Senseye, comments: "Integrating Senseye PdM with ThingWorx allows users to introduce condition monitoring and predictive maintenance immediately across their production environments

by analyzing their existing sources of machine data and accelerates the returns available from reducing the risk of machine failure and improving operational efficiency."

Matt Hardman, Senior Director - AI & Analytics at PTC, comments: "We are committed to delivering innovation that drives value for our customers, and our alliance with Senseye enables us to deliver just that. ThingWorx users can now connect their machines and maintenance data to Senseye PdM and start receiving actionable insights to help improve the safety, efficiency and effectiveness of their manufacturing and maintenance operations."

For more information visit:
www.senseye.io

New Free Fluke products when you buy a Fluke tool

Fluke will again be offering a free product to customers who purchase Fluke products between 15th February 2021 and 30th June 2021.

Customers who purchase Fluke products through authorized Fluke distributors have the opportunity to claim a free product. Claim the free product through the Fluke website with the original proof of purchase, invoice, or receipt.

New choices in Free Fluke products

The Free Fluke products to choose from have been updated; you will find new choices in all eight levels of free tools to claim. They are separated based on the value of your qualifying purchase, starting at as little as only £200. For each level there is a fixed range of products to claim, based on the value of the original purchase through and authorized Fluke distributor. A qualifying purchase includes Fluke electrical and industrial test tools, Fluke Networks, and Fluke Calibration products.

Full details for how to claim the free product, the range of tools available, and full terms and conditions can be found at www.fluke.co.uk/freefluke

How does it work?

For example, at level one, after spending £ 200 on a qualifying purchase, the claim can be made for a free unique Fluke TPAK™ Magnetic Hangclip, a soft carrying case to protect the newly purchased instrument, a Fluke 2AC VoltAlert™ Non-contact Voltage Detector, or a Fluke MT-8202-05 IntelliTone carrying case. At the top levels, levels seven and eight, a claim for the free tool can be made for a range of Fluke measurement tools such as the Fluke TiS20+ Thermal Imager, a Fluke 1664 FC Multifunction Installation Tester



or a PTi 120 Pocket Thermal Camera. Check all possibilities on www.fluke.co.uk/freefluke.

Fluke has everything engineers need for installation, maintenance, troubleshooting and repair in commercial, industrial and residential applications. The intuitive operation will save time when tracking down faults, meaning that the instruments immediately start paying for themselves.

Information about all Fluke products can be obtained via the Fluke website at www.fluke.co.uk.

Optimizing Steam Boiler Installations

In this article, following its recent launch of the SCOPE sequencing controller, Carl Knight – managing director of process steam and heat transfer specialist Fulton – takes a look at boiler sequencing control systems and how these intelligent controllers can optimise steam boiler installations to ensure energy efficient operation and improve boiler longevity.



control of the main steam header pressure, leading to more consistent pressure and steam dryness fractions, vitally important factors for sterilisation processes and accurate heat transfer rates; precisely-controlled process steam or hot water supplies; boilers operating at main header pressure or temperature not maximum pressure or temperature; improved boiler longevity thanks to redundancy; and improved fuel savings through eliminating idle time at low fire.

But what about the future of boiler sequencing and the development of intelligent control systems using Cloud?

Many processing facilities operate 24/7 so, to keep these facilities running consistently and efficiently, immediate action is often required and/or expected from the boiler manufacturer. By accessing its SCOPE intelligent sequencing system via Cloud based systems, Fulton is already looking to incorporate remote accessibility for diagnostic- and service-related issues; and providing remote data for system improvements, which can be accessed by specialist engineers for diagnostics and clients for data review.

Fulton is also looking at the ability to perform certain maintenance procedures or service steam boilers remotely, no matter where in the world they are installed. This would help to reduce the environmental impact and costs associated with travel to/from site, savings that can be passed onto the client.

The future will therefore offer simple sequencing control of multiple boiler installations or a full boiler-house energy management system, accessible remotely by the manufacturer and client alike, to provide an efficient solution for everyone.



Numerous processing facilities operate multiple steam boilers to meet the demands of their on-site processing equipment. Some sites operate a number of boilers to provide redundancy or reliability, others because space considerations mean multiple boilers are the preferred solution to a single, much larger boiler. However, if the steam boilers in facilities with multiple units are not optimised for efficiency, then the potential for any energy savings is not being utilised to its fullest.

The use of intelligent sequencing system can provide redundancy and reliability and also offer significant energy savings by automating start-up and shut-down procedures; controlling and optimising main steam header pressure or temperature; ensuring steam supply is controlled precisely for the required process; and balancing the load distribution across the boilers, thus eliminating extensive losses from repeated start/stop cycling of burners as much as is feasibly possible.

Sequencing should be about more than just simply on/off or start-up control. An intelligent sequencing system should also consider steam system load conditions and match this to the most efficient combination of boiler capacity according to the process requirements.

Load response and start-up times are also factors. For example, a boiler sequencing control system should be capable of knowing when running too many or too few boilers is having a negative effect on efficiency and productivity. It should be able to monitor and pre-emptively predict a sudden surge in demand and boiler utilisation by monitoring existing boiler demands, system pressures and flow rates; therefore starting/stopping boilers appropriately depending on the process demands.

There are also factors including what happens in the case of boiler failure, sudden high steam loads and even lack of boiler availability due to servicing. A good sequencing system should take all of these factors into consideration and then manage the boiler operation automatically. With the result being that the end user doesn't notice that a second or third boiler had to be started, because the machine they are working on has just started a high steam demanding stage during its production process.

Additionally, benefits that can be achieved through the installation of an intelligent boiler sequencing system, which can include complete automation for start-up and shutdown of the boilers; better

For additional information about Fulton, please visit www.fulton.co.uk.

Dazzled by floodlight glare in a pitch black tank? Wolf Safety finds the ideal solution

A totally enclosed tank in a hazardous area which needs inspecting, cleaning or repairing is never going to win a workplace of the month award. You need good portable lighting just to see where you're going, let alone carry out the task.

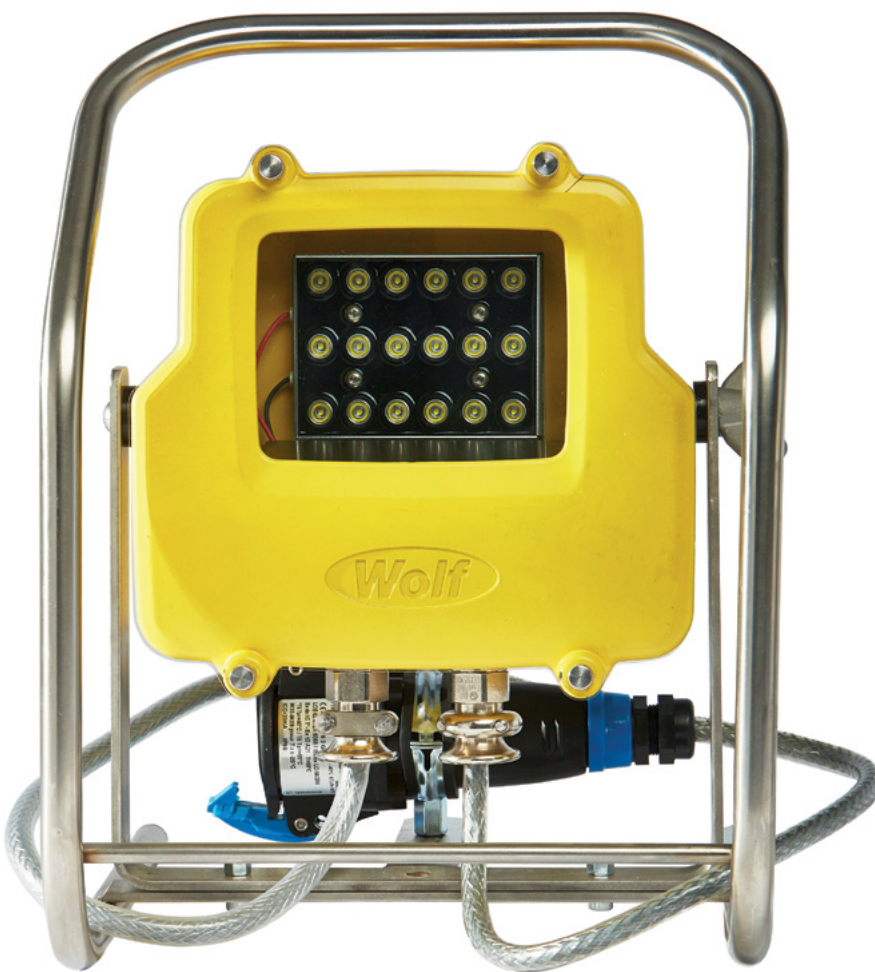
With full application support available from Wolf's technical team the WF-250XL offers an efficient, cost effective and highly versatile lighting solution for use in potentially explosive atmospheres, even in the world's harshest environments.

It also incorporates Wolf's unique SOVI™ technology which alerts the user if lights are running outside certified and optimal voltage ranges, maximising safety and performance. Both LV and HV units are certified safe down to zero volts, as are Wolf's WF-300®XL and LX-400/E luminaires.

"Users tell us our more powerful WF-300®XL Floodlite, which provides over 6,000 lumens, is great but can be too intense when working in small spaces," says Michael Morley, Wolf Safety's Technical Director.

"This new product not only solves that problem but also offers great lighting performance in confined spaces."

Fully compliant with the latest ATEX and IECEx standards, including OPIS (optical intrinsic safety), the unit is fitted with a highly reliable LED array designed to provide at least 100,000 hours of working life. The product's design and construction incorporate cooling fins which ensure effective heat dissipation for the LED array.



If you're working in a team there will be floodlights in use in different locations within the tank and the last thing you want is to be dazzled by the glare of your own light or those of your colleagues.

Aware of the problem Wolf Safety, world leaders in hazardous area portable and temporary lighting, have found the ideal solution. Their design

team has developed a highly portable LED task floodlight, designed to reduce beam glare when working in potentially explosive atmospheres.

The robust LinkEx™ WF-250XL Floodlite, easy to carry and more economical than comparable units, produces more than 3,000 lumens of white light, more than enough to illuminate a 5m square tank or similar space without dazzling.

For further information visit:
www.wolfsafety.com

TOUGH & RELIABLE IN HAZARDOUS AREAS

- ATEX/IECEx ZONE 1/21
- UP TO 3,100 LUMENS (EMITTED) - IDEAL FOR SMALLER CONFINED SPACES
- UP TO 8 LIGHTS CAN BE CONNECTED FROM ONE WOLF TRANSFORMER
- FULLY LINKABLE (UP TO 20 LIGHTS CAN BE STRUNG TOGETHER WITH THE HV VERSION)
- SOVI™ TECHNOLOGY ALERTS THE USER IF LIGHTS ARE RUNNING OUTSIDE CERTIFIED AND OPTIMAL VOLTAGE RANGES
- CERTIFIED SAFE TO 0 VOLTS
- IDEAL FOR 24 VOLT APPLICATIONS WITH A LIMITED POWER SUPPLY
- TOUGH, RELIABLE, PROVEN MATERIALS FOR LONG LIFE



CHOOSE THE ULTRA RELIABLE
WF-250XL
LED FLOODLIGHT



Wolf



WOLF SAFETY LAMP COMPANY T: +44 (0) 114 255 1051
SAXON ROAD WORKS W: WOLFSAFETY.COM
SHEFFIELD S8 0YA E: INFO@WOLFSAFETY.COM

Explosion Proof ATEX Zone 1 iPhone 11 For ATEX and IECEx

Atexxo Manufacturing has released an Apple iPhone 11 which is suitable for use in Zone 1 and Zone 2 hazardous locations. The explosion proof iPhones are originally manufactured by Apple then converted and certified according to ATEX and IECEx by Atexxo Manufacturing.

This makes the ATEX and IECEx smartphones suited for safe use in gas/vapour Zone 1 and zone 2 hazardous areas. Sim-card can be installed by the end-user themselves.

The devices are suited for Apple (open) DEP enrollment program.

All features of the original product are preserved. Including all pushbuttons, wireless charging and sim-card installation. The ATEX/IECEx iPhone 11 comes with an aluminum case finish and is available in 64, 128 and 256gb versions.

Beside safe use as a smartphone all versions are

excellent for use explosion proof camera or RFID scanner. For Middle East countries, versions with blocked cameras are available.

Features:

- Explosion safety level: II 2G ; ATEX & IECEx Ex db IIC T4 Gb
- 64Gb, 128Gb or 256 Gb
- Self Sim-Card Installation
- Suited for Apple (open) DEP enrollment

Explosion Proof ATEX/IECEx Zone 1 & Zone 2



Applications:

Hazardous material storage, petrochemical plants and oil and gas extraction sites.

For more information, visit:
www.atexxo.com

Atexor launches new 12V portable work light for Ex areas

In a first for Atexor's SLAM® portable ATEX work light portfolio, the new Hornet 1LED 12V supports exceptionally low voltages. New electronics give the Hornet 1LED 12V a supply voltage range of 9 to 15 Volts, as well as under and overvoltage protection. Hornet 1LED 12V ATEX is the solution when you need to use the lowest available voltage.



Built from the same robust, dissipative materials as the industry-proven SLAM® Hornet line-up, our new Hornet features construction updates that make our well-known easy work light maintenance even easier. SLAM® Hornets enjoy the highest level of serviceability in the market. The Hornet 1LED 12V takes it even further.

The Hornet 1LED 12V features high quality LED light with our SafeEye® diffuser technology to protect worker's eye from glare. It is tested safe for optical radiation (op is) and has a CRI over 85 for reliable colour rendering.

Atexor Oy leverages its decades of Ex lighting

experience to produce high quality, robust and trustworthy portable and fixed lights. All our products are designed and manufactured in Finland.

For more information visit:

www.atexor.com

**VIEW FULL
MAGAZINE ONLINE**

- + Extra Articles and features
- + Full Business Directory
- + Much More...

HESOnline
www.hazeng.com

All of our articles are available to read online today!
Scan the QR code to go directly to the site



Visit Us Online

www.hazeng.com

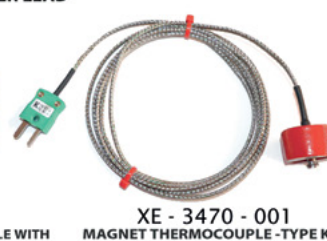
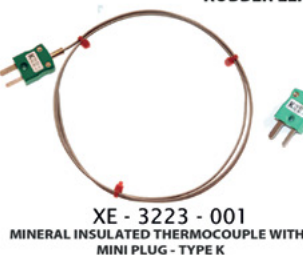
HES
Hazardous Engineering Solutions



Temperature Sensors

In Stock For Immediate Worldwide Despatch

- Manufactured by Labfacility
- IEC and ANSI options available
- Mineral Insulated Thermocouples with various termination options
- Platinum Resistance Thermometers Pt100
- Industrial Style Thermocouple with Terminal Head
- Environmental Sensors
- Flat Film and Wire Wound Detectors
- Handheld Sensors
- Fabricated and Specialist Thermocouples



www.labfacility.com

Bognor Regis tel: +44 (0)1243 871280



sales@labfacility.com

Sheffield tel: +44 (0)1909 569446

Buy On-Line at www.labfacility.com

Hydratight takes heat out of Industrial Complex maintenance shutdown

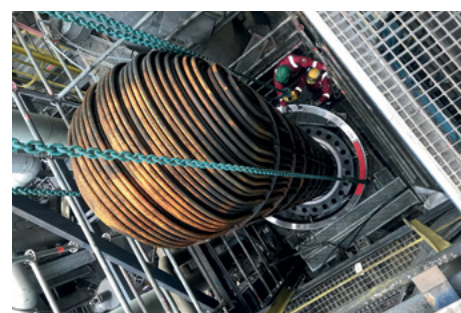
Portable Mirage milling machine technology ensured accurate metal-to-metal sealing for vessel covers and heat exchangers during maintenance work by specialty mechanical services company, Hydratight, at an industrial complex in Germany during the plant's annual shutdown.

A team of 40 Hydratight engineers from Germany, Holland, France, and the UK, operating under COVID-19 restrictions, was tasked with lifting vessel covers, performing on-site machining and controlled bolting on a number of vessels and heat exchanger joints, within the 45 day shutdown.

The Hydratight engineers reviewed and replaced bolts on vessel covers and heat exchangers. Hydratight has on-demand access to Enerpac bolting and machining tools as part of the Enerpac Tool Group. Where

necessary the team cleaned and removed welding rings on lids, shells and vessel chambers using a variety of industry leading tools and on-site machining techniques, including a specialized Mirage MM2000E milling machine.

For the largest vessel, the vessel cover weighing 5 tonnes was removed and refitted using Enerpac low-height skidding and compact cube jack systems, and a turntable. Before refitting, the cover was machined using the Mirage MM2000E milling machine, also part



of the Enerpac tool portfolio, to ensure an accurate metal-to-metal seal.

"We are delighted to have assisted our customer during their maintenance shutdown. Our ability to bring together a team of experts to deliver these services even in times of COVID is testament to our resilience and commitment to customer service," said Chris Huiskens, commercial manager Service & Rental, Hydratight.

For more information on Hydratight visit www.hydratight.com.

Combatting corrosion at the design phase

Is all bearing surface damage troublesome?

Up to 40 per cent of a vegetable crop can go to waste due to the aesthetic requirements of some supermarkets. While a wonky vegetable may not be the most visually pleasing, it possesses the same nutritional value as its perfectly proportioned counterpart. Here, Chris Johnson, managing director of bearing specialist SMB Bearings, explains why not all bearing surface damage should cause alarm and future headaches for offshore oil and gas plant managers.



Bearing surface damage can take many forms, from spalls in the raceways, wear from ineffective lubrication, corrosion due to harsh chemicals to false brinelling marks caused by static vibration. While surface distress can result in problematic symptoms such as excessive heat, increased noise levels, increased vibration or excessive shaft movement, not all external bearing flaws point to compromised internal machine performance.

Corrosion is a naturally occurring phenomenon and a common form of bearing surface damage that offshore oil and gas plant managers must

contend with. There are ten primary forms of corrosion, but bearing corrosion usually falls into two broad categories — moisture corrosion or frictional corrosion. The former is environment specific, but can appear on any component of the bearing, creating an alarming oxide layer as a result of a chemical reaction with a metal surface.

For example, in offshore mining, bearings are often exposed to moisture or mild alkalinity due to their contact with sea water. Mild corrosion may result in light surface stains, but in more serious cases, it can lead to etching on the surface of

the bearing, resulting in flakes of rusted material entering the raceway. For this reason, corrosion is often known as the natural enemy of bearings.

Corrosion isn't just visually alarming; it can also significantly impact a business' finances. According to the IMPACT study conducted by NACE International, the world's leading corrosion control organisation, it has been estimated that 15-35 per cent of annual corrosion could have been saved if optimum corrosion management practices were followed. This equates to savings between US\$375 and \$875 billion annually on a global basis.

The enemy?

It's impossible to ignore the significance of corrosion costs, however corrosion resistance must be considered alongside other operating requirements such as bearing longevity and load.

Consider this as an example. A drilling machine is required to operate with precision but must also operate in unforgiving conditions. Due to the extreme environment of oil and gas rigs, corrosion resistant bearings would be recommended. If a design engineer were to opt for a highly corrosion resistant bearing fabricated from polyether ether ketone (PEEK), this would stop the corrosion in its tracks, but the precision of the machine would be compromised. In this scenario opting for a high precision stainless steel bearing with superior

roundness while allowing some superficial corrosion may be preferable.

When assessing the suitability and quality of bearings, it is important to look beyond the external aesthetic. Corrosion control is just one performance requirement, which doesn't necessarily equate to poor performance or affect the bearing's internal rollability.

Ensuring the right equipment is selected is the first step — and this is imperative for both large-scale machinery and small components, such as bearings. Luckily, offshore facility managers can weigh up their design requirements and can choose to combat corrosion at the design stage. Here are three corrosion control methods to consider:

Material choice

Stainless steel is the most obvious choice for corrosion resistance and is widely used in the offshore oil and gas industry. It also has other advantageous properties such as durability and heat resistance. 440 grade stainless steel bearings have good resistance in damp environments and are often used in applications such as the food and beverage industry. However, 440 grade stainless steel bearings have poor resistance to salt water and many stronger chemicals, so for harsh offshore environments 316 stainless steel may be considered. However, as

316 stainless steel cannot be thermally hardened, 316 bearings are only suitable for low load and low speed applications. Their corrosion resistance is best when there is an ample supply of oxygen so these bearings are mainly used above the waterline, in flowing seawater or where the bearings can be washed down after submersion in seawater.

An alternative material option is ceramic. Full ceramic bearings made from zirconia or silicon nitride with PEEK cages can offer even higher levels of corrosion resistance and are often used fully submerged. Similarly, plastic bearings, with 316 stainless steel or glass balls, provide very good resistance to corrosion. These are often made from acetal resin (POM) but other materials are available for stronger acids and alkalis such as PEEK, polytetrafluoroethylene (PTFE) and polyvinylidene fluoride PVDF. Like 316 grade bearings, these should only be used in low load and low precision applications.

Another level of armour against corrosion, is a protective coating. Chromium and nickel plating offer good corrosion resistance in highly corrosive environments. However, coatings will eventually separate from the bearing and need continual maintenance. This isn't the most practical option for offshore applications.

Lubricants

A lubricant provides a thin film between the contact areas in a bearing to reduce friction, dissipate heat and inhibit corrosion on the balls and raceways. Surface roughness and lubrication quality are extremely important influencing factors as to whether surface distress will occur or not.

Opting for the correct lubricant matters. In an environment where superficial corrosion may occur on the outside of the bearing, it should not

be allowed to occur on the inside. SMB Bearings can supply sealed bearings with waterproof greases that contain corrosion inhibitors. These lubricants protect the internal surfaces of the bearing and can be matched to the specific offshore application environment. Full ceramic bearings are mostly specified without lubrication but can be lubricated with waterproof grease for extended life.

Seals

In harsh environments, contamination protection is of utmost importance, so opting for a contact seal is favourable to ensure contaminants do not enter the bearing. For equipment that may be exposed to moisture, a contact seal will also offer increased water resistance. This will stop grease washing out of the bearing, allowing it to do its job in lubricating and protecting the internal surfaces of the bearing. An alternative option is a metal shield but this offers greatly reduced protection against moisture.

By assessing the operational environment, required longevity and loads that will be applied to the bearing, the best bearing may be the humble 'wonky vegetable' and not the one that remains looking aesthetically pleasing for the longest. By considering a bearing's full environmental operating conditions, design engineers can weigh up whether opting for a corrosion control design feature will be the most cost effective, increase the bearing's lifespan and elevate a machine's performance.

For further information about SMB Bearing's range of bearings for corrosive environments, visit the website: www.smbbearings.com or contact a specialist today sales@smbbearings.com.

A Pressing Need For Automation

Mitsubishi Electric and local system integrator AR Controls have provided a winning steel sheet press automation solution to Unipres, a major player in the global automotive industry. The upgrade allowed the car part manufacturer to significantly increase the uptime, productivity and energy efficiency of its transfer press, while also empowering operators to have greater insight and control over the production processes.

obsolete and unreliable. We were experiencing regular failures and had to stop our operations on a daily basis, greatly affecting our uptime and productivity. Also, when the control system was encountering issues or anomalies, it was impossible to interrogate it to get to the root cause of the problem, further extending unwanted downtime."

This situation was a major limit to Unipres' competitiveness. In effect, as an automotive tier 1 supplier, the company is committed to just-in-time deliveries, which can be compromised by unexpected downtime. Also, in the case of system failure, the company would not be able to access spare parts or replacement equipment from Reliance, as the company no longer exists.

With support from the original control system provider not an option, Unipres turned to Mitsubishi Electric and local factory automation integration company AR Controls for advice with a view to recommending a viable upgrade solution. The companies all have a longstanding relationship that dates back to when the Unipres plant in Sunderland was built, so AR Controls was familiar with the factory and were able to quickly take stock of the issues the equipment was causing.

Reverse engineering a legacy control system

The upgrade was particularly challenging, due to the complexity of the transfer press and the need to thoroughly understand the existing control system. As Mike Dickinson, Business Development Manager at AR Controls explains: "Unipres' old solution was not a particularly common system and there aren't many specialists around that have experience with it."

A substantial portion of the project consisted in reverse-engineering all the functions offered by the legacy motion control system as well as what parameters were being regulated. As sometimes



In its facility in Sunderland, Unipres produces around 560 tonnes of steel press-formed automotive components for global manufacturers, such as Nissan and Honda. In order to keep pace with production demands, the company needed to upgrade its factory automation.

The pressed parts are produced by using a fully automated, continuous multi-die stamping process. Metal sheets are placed in a multi-axis transfer press, where they are automatically moved across different stations. Each station uses a specific die to press the object into shape. As the metal sheets go through the various die

stations, more details are added to their design, until they reach their final form.

In order to deliver product quality and consistency, it is necessary to have a reliable, accurate and responsive motion control system in place. After many years of operation, the existing solution at Unipres (a legacy Reliance system) couldn't support the quality and productivity levels expected by the company.

Gregg Wallace, Senior Supervisor for Maintenance & Engineering at Unipres, explains: "The motion control system had become

key data or pieces of information were missing, we had to create a resilient system that would be able to handle any variables."

Ian Patterson, Key Account Manager at Mitsubishi Electric, adds: "Sometimes we faced gaps or inconsistent details about the movement of each axis. For example, the existing documentation on press feed speed was not accurate enough. We were able to address this issue by making the system flexible in controlling the speed while ensuring that this would not have any impact on the mechanical components of the transfer press."

Another challenge consisted of completing the upgrade without affecting the whole plant uptime. Advanced simulations and offline testing were used to assess and adjust the new motion control system. More precisely, the project greatly benefitted from Mitsubishi Electric's simulation tool to evaluate software performance in combination with a full-size mechanical test rig built by AR Controls.

Advanced automation for better control

The resulting motion control system for Unipres' transfer press combines Mitsubishi Electric's PLCs, servos and HMIs. To control the multi-axis operations of the transfer press in its de-stacking, pressing and transfer activities, three Q series PLCs were selected. These are often installed in similar applications due to their high speed and accuracy as well as the ability to handle large volumes of data. The controllers are networked together as well as with MR-J4-DU servos to



regulate the process. Each PLC is also linked to its own GOT2000 HMI to deliver visibility and diagnostic tools.

In addition, the project features the first application in the country for Mitsubishi Electric's MR-CV power regeneration converter unit. This is connected to the servos to recover braking energy from the servo axis and feed it to the mains supply. This innovative solution replaces the brake resistors that were previously in use.

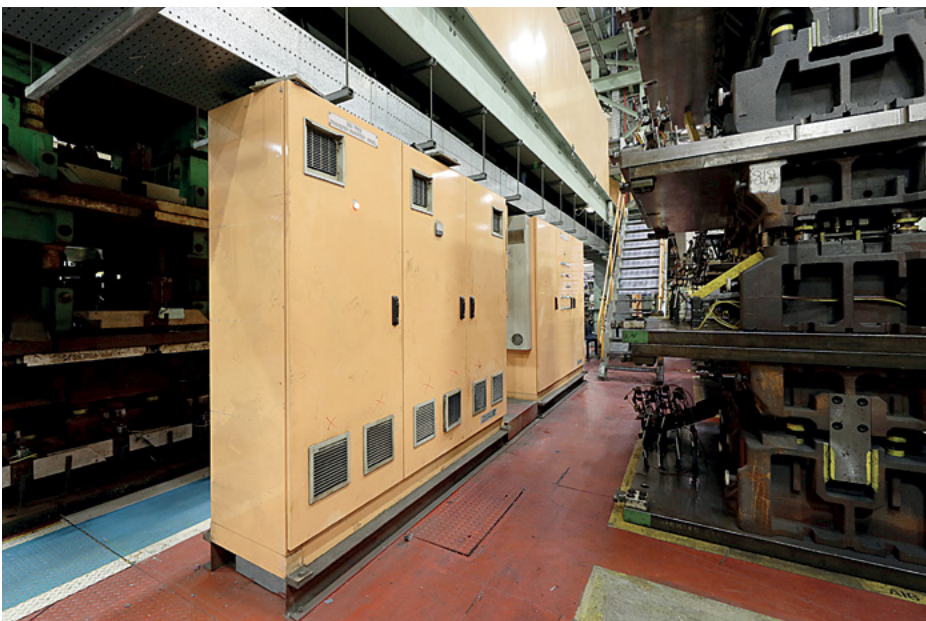
More than a simple upgrade

With the installation of the new motion control system completed to a set time schedule, the downtime and maintenance issues of the previous system have become a thing of the past. Ian Holt, Supervisor - Engineer Press Maintenance at

Unipres, commented: "Transfer press operations are now completely reliable, and our uptime has skyrocketed. Also, the HMIs from Mitsubishi Electric offer key diagnostic tools to our operators so they can address issues quickly and efficiently if they arise." Even more than fixing the system that was in place, process speed has now increased from 21 to 26 cycles per minute, greatly improving productivity and production capacity.

The new setup also delivered additional benefits. The HMIs offer a convenient way to change process parameters and support future modifications and expansions. In addition, the power regeneration converter unit greatly increases the energy efficiency of the transfer press system whilst using less components. As the MR-CV sends the energy directly to the mains supply, resistors, brake units and other pieces of equipment are not needed. As a result, Unipres can rely on a system with lower maintenance requirements as well as optimise its manufacturing footprint. In fact, the new control panel cabinet is a quarter of the size of the original one.

Paul Armitage, Deputy General Manager – Maintenance at Unipres, comments: "We are delighted with the solution provided by Mitsubishi Electric and AR Controls. So much so that we are talking to the same team about upgrades on the control systems for two other transfer presses."



For more information visit:
gb3a.mitsubishielectric.com

NEW Solid Gear Safety Footwear Styles for 2021

Incorporating some of the most advanced technical features in safety shoe design for tradesmen and women.



both integrate best-in-class materials for water protection and durability.

The waterproof, breathable GORE-TEX® linings keep your feet dry and comfy, while the Vibram® outsole and CORDURA® ripstop fabric offer great protection and

Sporty looks, best-in-class materials technology and superior comfort are hallmarks of Solid Gear safety footwear. 2021 sees the launch of the Marshal GTX boot and the Enforcer GTX shoe that

rugged utility. The unique BOA® Fit System also distributes lacing pressure evenly across your feet for a glove-like fit.

The Solid Gear footwear range is packed with market-leading features and hi-tech designs that combine top quality materials for ultimate comfort, maximum safety and wellbeing at work. Like the lightweight fibre-glass toecaps and technical composite plates that are lighter and thinner but still stronger than their predecessors for S3-class protection all day long.

To get more information on Solid Gear Safety Footwear, visit the website at www.solidgearfootwear.com
You can call the Helpline on 01484 854788
or email sales@hultaforsgroup.co.uk

NEW Jackets, Work Trousers & Topwear in the 2021 Snickers Workwear Catalogue

With verifiably sustainable fabric technology innovations.



With a focus on comfort, performance and sustainability in its new products, the 2021 digital catalogue has all you need to know about Snickers Workwear, including new products that now use REPREEVE, the world's number one brand of recycled performance fibre.

There's also new AllroundWork Topwear with the cooling 37.5® moisture transportation fabric, as well as upgraded FLEXIWork Stretch Trousers with extra functionality and durability. By popular demand, there's also a stretchy hi-vis Work Jacket with great comfort and flexibility for high-performance work and high visibility in low-light conditions.

Added to which, there's the most innovative street-smart stretch fabrics in the ALLROUNDWork

clothing range for mobile comfort and a Layered Clothing System that ensures you can choose clothes to suit the weather on site – rain or shine, wind or snow - plus an extensive range of EN-certified ProtecWork and PPE products.

Complimented by Snickers Workwear's Profiling and Embroidery services and the most extensive range of garment sizes, this clothing system delivers the ultimate solution to make every man and woman's workday easier and safer.

Getting more information on the Snickers Workwear range is easy. You can call the Helpline on 01484 854788; check out https://www.snickersworkwear.com/page/product_guide_media and download a digital catalogue or email sales@hultaforsgroup.co.uk

Snickers Workwear High-Performance Jackets

Workwear – Protectivewear - Performancewear – Leisurewear.

With street-smart designs for men and women, all Snickers Workwear jackets include must-have features that focus on fit and freedom of movement as well as using innovative fabrics that deliver long lasting protection and stretch comfort.



Whatever you need – if it's for work, play or protection against hazards – Snickers Workwear has Jackets that will work on site, are ideal for leisure, always ensuring optimal performance, comfort, good looks and visibility.

ALLROUNDWork Jackets are just what the name suggests, delivering a great all-round performance. There's also FLEXIWork Jackets that provide superb comfort and weather-proofing if

you're always on the move and LITEWork Jackets that keep you feeling cool and looking good whatever you're doing in warm weather.

So check out the performance, comfort and protection features of Snickers Workwear Jackets, there will be one to suit you - wherever you are, whatever you need, whatever you're doing.

Getting more information on the Snickers Workwear jackets range is easy. You can call the Helpline on 01484 854788; check out www.snickersworkwear.co.uk/products/93 and download a digital catalogue or email sales@hultaforsgroup.co.uk

EMMA Safety Footwear Will Improve Your Carbon Footprint

Safety Footwear that's a step ahead in taking the environment seriously.

EMMA is a socially responsible brand that delivers a 100% circular footwear offering that is set to change the way we buy and use safety footwear.

Businesses from all industry sectors, from construction to manufacturing, to logistics, warehousing, office and retail, are making huge strides in sustainability and making bold public commitments to improving their social impact and encouraging their supply chains to do the same.

As part of these efforts, many businesses are embracing the circular economy and looking for opportunities to eliminate waste and find ways to continually use resources. That's where EMMA steps in to be an active part of the corporate sustainability programme.

Every piece of footwear in the EMMA range is made entirely from recycled or recyclable materials. They're safe for the environment with a 100% 'circular' manufacturing, usage-mapping and recycling process for every shoe and boot produced under the EMMA brand.

Part of the Hultafors Group portfolio of market-leading PPE brands, EMMA complements the Solid Gear and Toe Guard safety footwear ranges by including all the Hultafors Group hallmarks of hi-tech designs that combine top quality materials for ultimate comfort, maximum safety and wellbeing at work.

So, to make a positive social impact in your workplace, if your ordinary safety footwear just



isn't contributing to your sustainability policy, you can be sure there's an EMMA product that is.

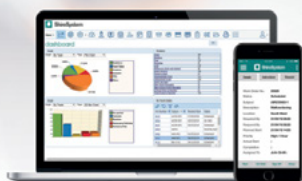
To get more information on EMMA Safety Footwear, visit the website at www.emmasafetyfootwear.com, call the Snickers Helpline on 01484 854788 or email sales@hultaforsgroup.co.uk

Asset Management/CMMS



"The complete CMMS"
Chris Drury, Ferrero

Helping businesses to increase productivity and reduce downtime



Contact us today for your free trial
023 8022 4111
shiresales@elecosoft.com

Elecosoft®



A SMARTER CHOICE TO MANAGE MAINTENANCE

Start reducing maintenance costs and saving time with an easy-to-use, affordable, and intelligent CMMS solution.

Book a demo!

- Web-based & Mobile (Android, iOS and Win10)
- Easy-to-use
- Quick installation & customisation
- Integrates with Corporate Systems
- Real-time reporting & dashboards

www.valuekeep.com
+44 (0) 20 8068 9242
info@valuekeep.com

Boilers & Burners

Interested in Advertising here?
Contact: Steve Pheasant
Media Manager
Tel: 07962 666987
Email: stevep@mslmedialtd.com



Modern Coil Type Steam Generators & Fire Tube Boilers

- 100Kg/h – 25,000Kg/h
- High efficiency - up to 96%
- Low overall emissions
- Improved safety
- Simplicity of control
- Quiet, clean & cool in operation

Tel: 020 8953 7111
info@babcock-wanson.co.uk
www.babcock-wanson.co.uk

Interested in Advertising here?
Contact: Steve Pheasant
Media Manager
Tel: 07962 666987
Email: stevep@mslmedialtd.com



EMSOnline
www.engineeringmaintenance.info
Visit Us Online

All of our articles are available to read online today!
Scan the QR code to go directly to the site

www.engineeringmaintenance.info



Boilers & Burners



Twin Industries International

Leading
BOILER BROKERS
for all
INDUSTRIAL BOILERS

Steam ♦ Hot Water ♦ Thermal Fluid
New ♦ Reconditioned ♦ Hire

Contact us or visit our website for

The largest selection of
Reconditioned Steam Boilers
available –

all with different suppliers,
who will quote you direct

SELLING A BOILER – contact us

01252 845521

sales@twin-industries.co.uk

www.boilerbrokers.com

Compressed Air

Leak Detection Spray



At the press of a button - **GOTEC LDS** is instantly ready to locate even the smallest low pressure leaks from compressed air, natural gas, LPG, refrigerant and every other gas - quickly, reliably, safely and conveniently.

- 400ml contents per can
- Non-flammable • Non-corrosive • Biodegradable
- Free from oils • solvents • halides • salts
- Spray can at any angle - 360° - upright to inverted
- NATO Stock No: 4910-99-930-4489
- VOSA & DIN EN 14291 compliant
- ISO 9001 Approved Manufacturer
- For sub-zero temperatures down to -45°C use GOTEC LT45



Gotec Trading Limited
Boulton Road, Pin Green
Stevenage, Herts SG1 4QL
Tel 01438 740400
Fax 01438 740005
enquiries@gotectrading.com
www.gotectrading.com



INDUSTRIAL
BOILER
HIRE & SALES

STEAM • HOT WATER
• MOBILE • CONTAINER • STATIC



HIRE • SALES • 24/7

+44 (0)1992 451629
www.kingsboilerhire.com

Condition Monitoring

ROTECH SYSTEMS



FOR ALL YOUR INDUSTRIAL
MONITORING SOLUTIONS

Why Accept Anything Less?

- ENCODERS
- CONTROL MODULES
- VIBRATION SENSORS

www.rotechsystems.co.uk
Sales@rotechsystems.co.uk Tel: +44 (0)151 356 2322

Tank Storage

KING STORAGE TANKS



HORIZONTAL CYLINDRICAL TANKS

From 27,250 litres to 54,500 litres
(6,000 - 12,000 gallon)

Single and twin compartments, with cradles

BUNDLED TANKS

From 10,000 litre to 27,000 litre
(2,000 - 6,000 gallon)

with cabinet, gauge and alarm

All suitable for fuel, water & effluent
Call today for details

01638 712328 | tanks@thekinggroup.co.uk

Gas Detection

GfG Gas Detection UK Ltd
Manufacturer of
Portable & Fixed
Gas Detection Equipment

smart
GasDetection
Technologies

We've got you covered

WITH OVER 500 DIFFERENT GASES DETECTED

We've got you covered

GfG TotalCare®
TAILORED SERVICING

FOR TRUE COST OF OWNERSHIP WITH NO HIDDEN EXTRAS

We've got you covered

Do you need Professional Gas Detection advice?
Do you need more Gas Detection cover?
Do you need a review of your existing Gas Detection System?
FREE NO OBLIGATION ON-SITE GAP ANALYSIS

GfG GOOD FOR GAS

UNIT 4 BRIDGES BUSINESS CENTRE WEST STREET COGDONSHALL ESSEX CO11 1NT
sales@gfggas.co.uk www.gfggas.co.uk Tel: 01376 561463

Temperature Sensors

LABFACILITY
TEMPERATURE & PROCESS TECHNOLOGY
www.labfacility.com

Phone: 01243 871280 Email: sales@labfacility.com

Labfacility are the UK's leading manufacturer of
Temperature Sensors and Thermocouple Connectors.

- * Thermocouple Connectors (IEC, ANSI, JIS)
- * Thermocouple Cable (IEC, ANSI, PRT)
- * Temperature Sensors (Thermocouple & PRT)
- * Sensor Installation Fittings
- * L60 Thermocouple & Fine Wire Welder

In addition to stocked
items, Labfacility also
offers bespoke
Temperature Sensors.

Thermal Fluid



Thermal Fluid Heating

Technology now for the future

- Up to 50% energy savings
- Compact size
- Easy & safe to use
- Works up to 350°C
- Low exhaust emissions
- High efficiency
- Requires no specialist knowledge
- Corrosion free operation
- No chemical treatment

Tel: 020 8953 7111
info@babcock-wanson.co.uk
www.babcock-wanson.co.uk

YOUR PARTNER IN ULTRASOUND



INSTRUMENTS

Leak Detection
Bearing Condition Monitoring
Bearing Lubrication
Steam Traps & Valves
Electrical Inspection



TRAINING

CAT & CAT II Ultrasound Training
Onsite Implementation Training
Application Specific Training



CONTINUOUS SUPPORT

Free support & license-free software
Online Courses
Free access to our Learning Center
(webinars, articles, tutorials)

**UE SYSTEMS
UK & IRELAND**

CHRIS HALLUM
+44 (0) 7930 352 188
chrish@uesystems.com

CONTACT US FOR AN
ONSITE DEMONSTRATION