INDUSTRY UPDATE

Inside this Issue







Worthington Creyssensac



Company of the Month See them on page......17

Contents

2-3	Editor Reccomemds
6	Electronics
10-11	Print & Packaging
12-13	Advanced Materical
	Review
14-15	Handling & Storage
16	Pumps & Valves
18	Cereals Review
20	Smart Retail Technology
	/Machinery
24	Company Of The Vear

24 Company Of The Year

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White Label World Expo Frankfurt

White Label World Expo Frankfurt is Europe's leading event for online retailers taking the ecommerce sector by storm!

Discover everyone from innovative startups to industry experts all under one roof at the Messe, Frankfurt on the 12th & 13th of October. Join thousands of other like-minded professionals looking for inspiration and education across the ecommerce sector!

White Label World Expo Frankfurt is the ultimate destination for any online seller, retailer, and entrepreneur looking to emerge in their desired market! Thousands of visitors gather all under one roof for this unmissable event to divulge in the latest products, services, technologies, trends and much more! They have hundreds of exhibitors with their innovations you can try, test, sample and buy!

Meet startups, industry experts and everyone in between and grow invaluable business relationships that can benefit the future of your business for years to come! Immerse yourself in the exciting hub with hundreds of innovations for you



to explore!

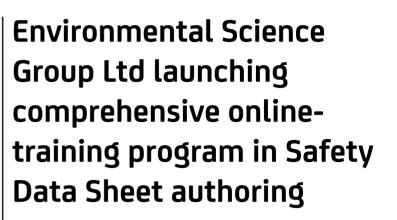
By attending the show you can meet thousands of professionals who you can network with to build your valuable web of connections. In addition to this, meet hundreds of expert key decision makers across world-famous brands! Hear from their stellar keynote speaker lineup including Gucci, Meta, QVC International, L'Oreal, Ikea and more and learn about their own tips, tricks and success stories

It is keynote speaker galore at White Label World Expo Frankfurt!

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So what are you waiting for secure your FREE ticket today!

www.whitelabelexpo.co.uk



Pinvironmental Science Group Ltd (ESG) announced recently the launch of its first ever commercially available training course, in the field of Safety Data Sheet authoring. Following a successful roll out among their current intern programme, ESG are now opening this exciting development opportunity up to all.

Available nationwide, via online, interactive learning modules, the complete training course provides candidates the chance to develop an entry-level skill base for a career opportunity, in what is, at the moment, a largely underrepresented and exclusive technical sector.

Here is what some of the internship delegates had to say:

"Even as someone with very limited knowledge in this particular field, I found the course very easy to follow. It progressed logically and at a pace that allowed me to absorb the material properly... I was always made to feel comfortable when asking questions and the lecturers were patient



with everyone, ensuring we were able to grasp what we were learning..."

"I loved that we were asked questions which encouraged us to really think about how our theoretical skills would apply in practical settings... this really helped me to build confidence..."

"I feel really privileged to have been a part of this training programme, as there are so few people with considerable expertise in this specific aspect of safety regulation. What a fantastic opportunity!"

Release of the first module is currently planned for October 2022. Candidates wishing to register their interest can do so via the company website: www.envsciencegroup.com

Contact T +44 (0)1354 653222 enquiries@envsciencegroup.com



The entire content of this publication is advertorial based. To place an advertorial or an advert, please call 01562 756960.

Editor Recommends

Circular economy and urban mining – the future of construction is sustainable 💮 *surplex* for housing, deforestation and the use of harmful materials are

Despite full order books, the construction industry does not seem to be celebrating. After two difficult years plagued by the covid-19 pandemic, we were just about to breathe a sigh of relief when the current geopolitical situation put an abrupt dampener on things. Logistical problems and - more than anything - a shortage of raw materials are making it difficult for the construction industry to meet the rising demand for construction projects. However, the current situation is also opening up the chance for further development – from which the industry will be able to gain long-term benefits.

Grev emissions – the climate killer

One of the main struggles faced by the construction industry is sustainability. Many people try to do their part for the environment in everyday life, such as by eating less meat or flying less often. But individual people can only do very little to stop climate change by themselves. The majority of global CO, emissions comes from industry. And the construction industry is a major contributor.

"Grey emissions" are emissions produced during construction and in the manufacture of building materials. According to the World Green Building Council, they account for 39% of global CO₂ emissions and over half of annual waste in Germany (German Federal Environment Agency).

Trees are cut down and ground sealed up, wreaking havoo on the natural CO, storage process and flood protection. Revolutionary changes are needed for the construction industry to tackle these problems and promote environmental protection

It all comes down to the raw materials

When it comes to making the construction industry more sustainable, a key issue is the raw materials used and what these will have to look like in future. For example, a team of researchers in Switzerland is working on developing cement that doesn't consist of limestone, but rather magnesium carbonates. This is processed into cement using water and CO₃, meaning that it binds more carbon dioxide than it emits. To improve the climate balance of construction projects, demand for alternative materials such as loam is growing. Loam is able to draw moisture out of the air and store it, absorb heat more slowly and thus keep buildings cool in summer and warm in winter. Wood is also gaining significance, and few buildings nowadays are planned without a photovoltaic system or some sort of vegetation.



The construction sector is changing. New raw materials and optimised processes should give it a more sustainable future. (Sarawut Kaewket, Shutterstock)

A gold mine, not a pile of junk

But it will take more than just new approaches to raw materials to achieve climate targets and make the construction industry more sustainable. Another megatrend appearing in the industry is "urban mining", which involves looking at an urban area as a storehouse of raw materials that can be used to obtain materials for new projects. For example, buildings planned for demolition can be taken down systematically and materials such as stone, wood and iron used for a new project. If the building has been well maintained, these materials will be in good condition and can be reused. Firstly, this procedure reduces waste while taking down or demolishing a building, while secondly, it cuts down on the amount of new materials required for the next project

To make urban mining easier and more effective in future, easy demolition at a later stage needs to be taken into unt when constructing new building fastening methods for concrete are currently in development to enable large pieces to be separated more easily. Urban mining therefore preserves resources, reduces the burden on the environment and cuts emissions by eliminating the production of new materials.

A second life for construction machinery

A sustainable construction process is not only possible for the raw materials themselves, but also when it comes to construction methods. The circular economy implemented in urban mining can also be applied to construction machines. Second-hand machines also enable savings on CO₂ and raw materials. Industrial auctioneers such as Surplex specialise in selling used machines and supporting sellers and buyers at every step of the process. For example, if an excavator is

no longer needed for in-house production. Surplex can include this in their portfolio and sell it on. This means that the device doesn't need to be scrapped and can find a new home. This allows sellers not only to free up capital, but also to make their own operations more sustainable and prevent the additional strain on the environment caused by producing new construction machines

Shaping tomorrow's construction industry today The construction sector is one of the biggest offenders when it comes to climate change. The increasing use of open spaces

threat to the global climate. But even today, the construction industry can take steps to modernise itself through the use of modern raw materials, urban mining and a circular economy of materials and machines, thereby greatly reducing their high share of global CO₂ emissions.

resulting in dangerously high grey emission levels that pose a

Contact www.surplex.com info@surplex.com

Oliver Valvetek Supply on Short Lead-time to South America

Oliver Valvetek distributes the first of two orders for its Subsea ¾" Actuated Gate Valves, earmarked for South America

Our subsea gate valves are designed for operation at 15,000 PSI and have been specifically chosen for the project. We were able to work with the customer to meet a reduced lead-time for deployment on the first trees and EDP package,



shipment of the second order of valves is expected at the end of October this year.

The deepwater field development plan

involves production wells connected to a floating production storage and

> offloading (FPSO) unit. The FPSO will be permanently anchored to the seabed with a spread mooring system. The operational life of the FPSO is estimated to be a minimum of 25 years and will be one of the largest vaivetek in the region.

For more information on Subsea valves, contact Oliver Valvetek on +44 (0)1565 632 636 or email sales@ valves.co.uk I www.valves.co.uk

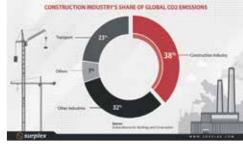


Polymeric Material Failure Consultants Ltd provides an engineering failure analysis service working with clients to build a reliable understanding of plastic and rubber component failure.

Engineering and materials expertise and experience extends to the Oil & Gas, automotive, marine, building and medical sectors. Failure of non-metallic materials used in most hardware types or service environments can be studied. Evidence is gathered from component damage characterisation, material/component testing and forensic information gathering to propose the mode and root cause of failure.

PMFC ensures technical excellence through its ISO 9001:2015 Quality Management System to consistently achieve customer objectives.

> www.pmfconsultants.com philip.clarke@pmfconsultants.com T: 01992 509470 M: 07851 086922



The construction sector causes 38% of global CO, emissions – more than any other industry. (Surplex).



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ing Co. (Hull) Ltd. Pennington Street, Hull, East Yorkshire. HU8 7LD. UK

Hydrogen valve collaboration: Only Oliver's could do

Oliver Twinsafe have been working with their sister companies, Oliver Hydcovalves, and Oliver R&D, to prepare their 2" Metal Seated Trunnion ball valve ready for hydrogen applications. Rigorous testing using helium, which is the best substitute to hydrogen, has been carried out by R&D technician, John Whitehead, who said, "In order for the Trunnion valve to pass testing it had to meet with stringent ISO 15848-1:2015 Tightness class B certification including ISO 5208:2015 zero seat leakage rate A. We've achieved this with precision engineering and by providing a high-quality seal face finish

"This has been my first involvement on the Hydcovalves project and, as with all of our test standards, it's tough-

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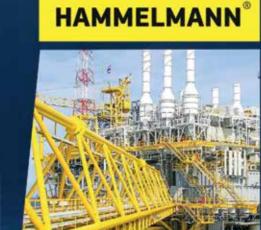
going and meticulous work is required to underpin the safety and certification which is paramount to the team. I've thoroughly enjoyed the hydrogen testing process. and to be involved in close collaboration with the Oliver group of companies at a very exciting time within the energy industry."

For more information on Twinsafe's range of Hydrogen valves or to discover Oliver R&D's capabilities and service, contact Ian Bryant or Nick Howard on 01565 632636, email: sales@valves.co.uk or visit their website at: www.valves.co.uk

olivervo

olivervalves 'I've thoroughly enjoyed the hydrogen valve

testing process' John Whitehead Oliver R&D Technician

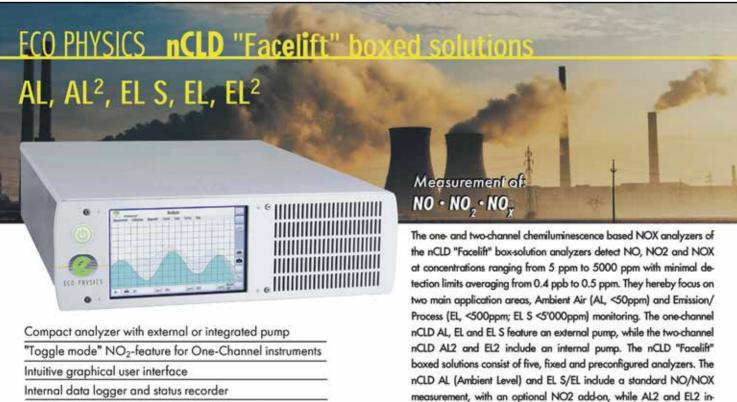




Hammelmann GmbH | +49 2522 760 | mail@hammelmann.de Hammlemann subsea pump technology protected in part by Patent No. DE10 2014 106 520 A1 (patent pending)

HAMMELMANN

www.hammelmann-process.com in V



Remote operation/control, Power DOWN/UP USB, HDMI, LAN/WLAN, Bluetooth, RS-232, Analog I/O measurement, with an optional NO2 add-on, while AL2 and EL2 include, due to the two-channel set-up, a standard NO2 detection. Additionally, all nCLD-models are capable of a remote power down/up including a failsafe feature. nCLD AL2 and EL2 are TüV approved, qualified according to ISO EN 14211 and 15267 1-3.

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Editor Recommends

Introducing Fluregiene 200[™]

urtiss-Wright Surface Technologies, Everlube® Coating Products have partnered with BioCote[®] to expand their fluoropolymer coating product range to create Fluregiene 200[™]: an antimicrobial coating that is ideally suited for many surfaces and environments

Based on existing $\operatorname{Everlube}^{\scriptscriptstyle (\!\!\!\!\!\!\!\!)}$ coating technology, the new Fluregiene 200™ is a unique fluoropolymer coating that offers low friction, easy-clean properties combined with superb chemical and abrasion resistance. With a view to improving hygiene standards, Everlube® Coatings have integrated BioCote® antimicrobial technology to protect the coating from microbes such as bacteria, mould and fungi. Benefits of applying antimicrobial technology into the Fluregiene 200™ include:

Anti-fouling

- Low COF Surface coating (0.08 0.2 static) ▼ Corrosion resistance and excellent chemical resistance
- Excellent chip and abrasion resistance
- Reduces and prevents build-up of contaminates Excellent flexibility
- Dirt and debris less likely to attach to the surface

Microbial & bacteria growth inhibitor

- Using patented BioCote[®] antimicrobial technology against microbial growth
- Inhibits and reduces microbial growth on protected coating Protects treated surfaces against bad odours, staining and material degradation

Easy clean and reduced cleaning intervals

Provides continual microbial reduction on coating High PTFE content allows easy wipe down and cleaning Provides more hygienic and cleanable surface than brushed

or finished steels

Applicable to a wide range of parts and components such as door handles, elevator buttons, airport seating and gym equipment, the Fluregiene 200™ will be highly beneficial for these surfaces. BioCote® also has real-life data



to support the application of this antimicrobial technology in environments such as health care, transport, education, public areas and much more.

For more information on Fluregiene 200[™] and Everlube®</sup> Coating Products, please contact our coatings team on: T +44 (0)1386 421444 info@cwst.co.uk www.cwst.co.uk

Make Yourself Seen -With Snickers Workwear

n extended range of sustainable and functional High Visibility working clothes for light to night, dawn to dusk.

As workplace visibility decreases and the potential for accidents increase, Snickers Workwear High Visibility garments work hard to protect your wellbeing and safety on site.

The extensive range of Jackets, Trousers, Shorts, Toolvests, Shirts and Fleeces all work together to satisfy the requirements of Class 1, 2 and 3 protection levels.

These outstanding products combine Snickers' unrivalled hallmarks for Protective Wear with the requirements of the EN 20471 standard for high visibility warning clothes.



With advanced designs and sustainable SORONA fabrics, all these working clothes haverdurable, colour-fast protection retaining shape and comfort throughout the life of the garments. Added to which, all Snickers Hi Vis garments can be custom profiled to ensure 'stand out' coverage for your corporate brand.

For more information on the Snickers Workwear Protective Wear range, call the Helpline on 01484 854788; check out www.snickersworkwear.co.uk and download a digital catalogue or email sales@hultaforsgroup.co.uk

Water Energy & Enviroment

TANA Recycling Machinery UK



TANA Recycling Machinery UK has a mission to provide customers with simply more money on the bottom-line with cutting-edge technology in solid waste management. All TANA products aim to provide maximum efficiency and profit to make waste management businesses thrive. TANA machines are designed with skill and experience using the best components available. All products are manufactured from the TANA headquarters in Finland.

When using the right machine, waste can be transformed into valuable raw materials. Reducing, re-using and recovering waste to manage waste sustainably can be done profitably. Efficiently recycling waste by conventional means is notoriously difficult, and in most cases only a certain percentage of the waste ends up recycled. But what if there was an easier way that recycled waste from a variety of materials?

We are lucky enough to have the most versatile machine on the market, the TANA Shark Shredder. General waste, mattresses, tyres, wood, plastic, C&I, C&D the Shark can handle them all and more. Pair that with excellence in service and you have a winning formula.

There are many applications to which the TANA Shark shredder can be used. It can shred all kinds of end-of-life tyres. These could come from cars, trucks, aircrafts, and heavy-duty vehicles and can be difficult to recycle. The TANA Shark uses hightorque shredders to make it possible to shred tyres to an 80mm particle size in just one pass and separates most of the metal wires directly from the shredded material flow on the conveyor. The steel wiring is removed in the shredding process by an over-band magnet in the unloading conveyor. Once separated, shredded tyres and metals can be sold and reused in many ways.

In support of the TANA shredders range, TANA ProTrack® offers the possibility to significantly improve the engagement of personnel to a company and their work. TANA ProTrack® allows users to track their operations in real time enabling them to see the numbers and understand the waypoints that in turn will increase work efficiency.

Customers of TANA Recycling Machinery UK operate in a variety of areas amongst the waste management industry. The team at TANA Recycling Machinery UK's job is to help customers do their jobs as easily, cost-effectively, and ecofriendly as possible. Their efforts and proficiency in achieving that goal has been recognised recently as they received the honour of accepting the Sales Team of the Year Award within the business.

Find out more at: www.tanauk.com



Recycling UK Limited

Recycling UK is one of the largest independent recycling companies/traders in the United Kingdom.

From its head office at Tarporley, Cheshire, and associate processing plants throughout the UK & Ireland, it can cover most recycling needs. It also has office/joint ventures in Mumbai, India, and Waterford, Ireland.

It is a trader of all grades of waste paper & plastic in the form of bulk loose, baled, or

palletised material, surplus or damaged reels & redundant stock of paper and plastic packaging and supply material to customers in the UK, Europe, India and throughout Asia.

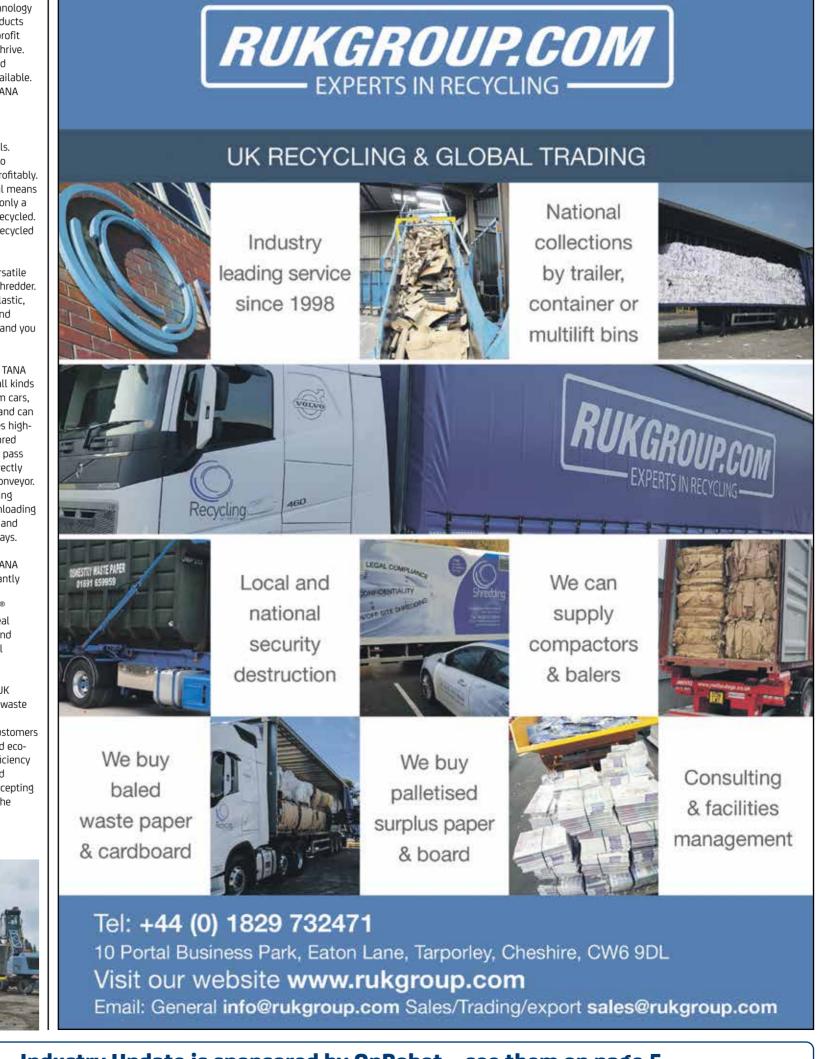
Its wholly owned subsidiary OWP Ltd processes over 1,500 tonnes per week at a dedicated plant at Oswestry situated on the England/Welsh border with material collected by various means within a 150 mile radius.

It also collects material throughout the UK and



Ireland using trailers for delivery to Oswestry or to one of our associate processing plants.

Please contact our commercial team on +44 (0)1829 732471 or email: commercial@ rukgroup.com or visit: www.rukgroup.com



Company Of The Year

One stop shop for collaborative applications



n this issue of Industry Update, we have selected OnRobot as our Automation Company of the Year.

Established in June 2018 by Enrico Krog Iversen, OnRobot is a global company with headquarters in the robotics cluster of Odense, Denmark. The company provides small and midsized manufacturers with a full line of innovative Plug and Produce solutions for collaborative robot applications. Its electric grippers, force and torque

sensors, tool changers, vacuum grippers and award-winning Gecko technology help manufacturers gain the full advantages of automation, including ease of use, cost-effectiveness, and safety alongside human workers. As the ultimate One Stop Shop for Collaborative Applications, OnRobot facilitates fast and easy automation in applications such as material handling, machine tending, surface finishing, quality and assembly.



The OnRobot product range features a wide assortment of tools and software for collaborative applications. Also, supported by the free, Learn OnRobot e-learning platform, OnRobot makes it easy to deploy collaborative automation on tasks such as packaging, quality control, materials handling, machine tending, assembly, and surface finishing regardless of skill level or previous robotics experience. The company's products are also compatible with multiple Cobot manufacturers and delivery times on all ranges are between just two and four days.

The company takes great pride in helping small and mid-sized enterprises (SMEs) to use its solutions to optimize their processes and grow their businesses with greater flexibility, higher output and improved quality. Collaborative automation has levelled the playing field for small and mid-sized manufacturers, and as robots become easier to buy and implement, the tooling has become the vital element in adapting for a wide range of applications.



OnRobot has also developed Collaborative Automation ready for palletizing. The lack of automation in palletizing, especially among SMEs, is understandable, but it means that there is a lot of hidden potential in end-of-line palletizing operations. Palletizing is a labour intensive, repetitive and unergonomic task, which makes it ideally suited to automation. The benefits of automating palletizing tasks include increased productivity and throughput, higher quality, and improved ergonomics. However, the cost and complexity of traditional palletizing robotic systems has prevented small to medium sized businesses from introducing automation to their facilities.

OnRobot's new modular, fully configurable Palletizer provides the solution needed by many companies. It is a complete modular palletizing solution that supports leading robot brands, and fits in any existing floorplan. Its intuitive, step-by-step software quickly programs and reconfigures palletizing tasks.

Alongside this, the automatic optimisation of robot motion reduces cycle time and extends equipment life. Its electric solution offers fast,

out-of-the-box deployment without the complexity and cost of external air supply. This OnRobot Palletizer is available as a complete solution that is more versatile and affordable than competing systems, and individual components can be combined for the perfect mix-and-match solution required. Palletizing is an excellent candidate for automation due to the repetitive and physically demanding nature of the work.



Collaborative Automation has many benefits in that it is easy to deploy and redeploy, and it reduces the total cost of ownership as there is no need to get teams of experts every time you need to make changes to your cell configuration. For SME's this often means that deploying automation becomes financially feasible for the first time.

This is the collaborative era, and SMEs do not have to choose between complex traditional automation and having no automation at all. Easy-to-use, affordable, safe, and reliable, collaborative solutions make automation accessible to companies of all sizes, with no PhD in robotics required!

The emergence of collaborative robot applications means that automation is now designed to level the technological playing field between SMEs and larger manufacturing companies. Collaborative automation and digitalization solutions also allow SMEs to bridge the technology gaps that once held them back.



In one fell swoop, a collaborative automation deployment can fill labour shortages, improve ergonomics and employee retention, and help companies to attract younger, digital native workers. Moreover, the increased productivity improves the ability to handle backlogs and supports reshoring initiatives, and the improved quality and reduced waste that results from a collaborative automation deployment boosts competitiveness.

From the sustainability perspective, SMEs have a wide range of allelectric collaborative automation solutions to choose from in these days, which is a welcome alternative to energy-hungry traditional pneumatic and hydraulic systems. Moreover, collaborative automation provides the flexibility required to quickly support sustainable manufacturing initiatives.

As OnRobot look towards the future, it intends to continue to challenge the status quo, by exploring new and unique technologies and continuing to increase its versatility. The company has recently





expanded the possibilities for automating assembly tasks with new features of the OnRobot Screwdriver Solution, including new Bit Extenders, which come in sizes 50mm and 100mm, enable screwing operations in narrow and tight spaces, and self-tapping screw functionality which enables applications for screwing while tapping the thread into pre-drilled holes.

This screwdriver for light industrial and collaborative robots will help to easily automate assembly processes. The product speeds setup and programming, and its intelligent error detection and multiple screw size handling will ensure consistent results and reduce your cycle time dramatically.



The OnRobot Screwdriver includes protective functions that make it appropriate for collaborative applications for screws up to 35mm long, which are fully retracted into the Screwdriver while in motion. Safety stop is automatically activated if a screw is exposed to excessive force along its axis, with alert lighting to indicate the issue.

OnRobot is an ambitious company that is always looking for its next innovation. "In November 2021, we launched our first remote monitoring and diagnostics software for collaborative applications. By implementing this new software, we can now focus on both hardware and software," stated General Manager, Vikram Kumar.

WebLytics is the first remote monitoring and diagnostics software to optimise production and minimise downtime for collaborative applications. Its intuitive, customisable dashboards transform raw data into actionable application and deliver device-level insights using industry standard KPIs. Furthermore, WebLytics also automatically collects, analyses, and reports on collaborative applications, including data from any OnRobot tool and any leading Cobot or light industrial robot.



The demand for automation has increased exponentially since COVID, and OnRobot knows that it is on the right path with its implementation of plug and place solutions. Vikram continued, "we are striving to expand our global presence gradually, and by being the top solutions provider we enable our customers to increase their revenue. If they strive, we strive."

For more information:

T +45 53 53 57 37 North-europe@onrobot.com www.onrobot.com

5

Electronics

Megaman[®] launches TEGO 2 integrated downlight



Global lighting manufacturer, Megaman®, has launched its adaptable, fully fire-rated TEGO 2 integrated LED downlight, ideal for commercial and domestic applications. The innovative and unique LED system features the option to easily change both the beam angle of the fixture and the colour temperature, all while in situ.

With Megaman's cutting edge Dual Beam Technology (DBT), the TEGO 2 has two beam angles – 60° and 36° – available in one fitting. By simply pressing the lens, the beam angle can be changed easily by both the installer and end user. Dual CCT 2,800K & 4,000K can also be activated by twisting the lens once installed. This allows customers to toggle the colour temperature between warm white or cool white as well as adapting the beam angle with simple light fingertip control – all while the fitting is in situ.

With a lumen output of 650lm at 7.5W, the TEGO 2 integrated downlight is also dimmable and rated IP65, making it ideal for environments with higher moisture, such as bathrooms and kitchens. The downlights are also tested to provide fire protection for 30, 60 or 90 minute ceiling constructions. The LED system includes up to 50,000 hours usage and a tool-free wiring install with a loop in/loop out function.

For more information about MEGAMAN®, please visit the website at: www.megamanuk.com

Making figures of eight fun

"Testing ring final circuit has always been a pain," said Brendan Beavermanager of Metrel UK, the innovator of electrical test solutions. "It is complicated and fiddly,



consequently it is time consuming. Our boffins at Metrel have found a method of making it simpler, and importantly much faster and easing your load."

"In fact we think it could save you up to 60% Of the time it takes to measure r1, rn, r2 and R1 + RN, and R1 + R2 . And it makes the process almost pleasurable"

"What we have is a new adapter and firmware. To use it you null all the test leads and croc clips, and then connect the incoming and outgoing lives, neutrals and PEs. Connect the tester and start the test. Initially it gives you r1, rn and r2."

"Next the tester is disconnected and the adapter is left at the board. The tester and its BS1363 plug test lead is taken around the circuit. It locates the socket with the highest R1+R2 and R1+RN reading and the measurements taken. The results can be saved for later certification" "This revolutionary adapter, A 2214, really is the productive man's ring continuity tester"

www.metrel.co.uk

Understanding thermal issues to reduce scrap

No matter what industry or what prevention measures are in place, some scrap is unavoidable. But there is a huge difference between the small amounts of scrap inevitable in everyday processes and the avoidable scrap that comes from a bad run.There are many possible causes, but one of the most overlooked causes of a bad run is down to thermal issues during the process. A quick fix can come from looking at thermal components such as heaters, controllers and sensors in your machinery, as Don McPeak, regional sales manager at industrial heating technology manufacturer Watlow, explains.

As a general rule, the more heat content involved with a manufacturing process, the higher the chances that the scrap being produced is related to a thermal issue. Unlike

a material or mechanical issue, a thermal issue might not be as visible to the eye on first inspection. It's not unusual for there to be several runs of irregular product, or long periods of downtime, before a problem can be pinpointed. Thinking about thermal issues sooner, rather than later, can reduce that downtime.

Thermal processes are everywhere in manufacturing today as the application of heat is one of the main ways to shape plastics, metals or rubber. In aerospace applications, parts such as engine brackets, frame parts and wing panels all require some degree of heat treatment. Aerospace manufacturers often have very high standards that they hold vendors to, and improper heat treatment can mean a faulty order.



To contact Watlow about thermal process issues or to upgrade your system, visit: www.watlow.com

WATLOW

PM LEGACY

WATLOW

PM LEGACY™ Panel Mount Controller

The Watlow[®] PM LEGACY[™] series panel mount controller is an industry leading PID controller that allows optimal performance utilizing simple control and menu functionality without complex features.

- Simplified menu
- Touch safe package
- PID auto-tune
 Standard bus
 Communications
 Agency approvals
 Three-year warranty

Powered by Possibility



Contact your local Watlow representative or visit www.watlow.com to find out more



Industry Update is sponsored by OnRobot – see them on page 5

6

Company Of The Year

Quality power supplies, installation and aftercare

n this issue of Industry Update, we have selected Constant Power Services as our Quality Power Supplies Company of the Year.

constant powerservices



Power Services Ltd has excelled in providing support and solutions to businesses seeking quality uninterruptible power supplies, installation and aftercare. The company appreciates the complexities of a specification, the time constraints on finalising a project and understands that it can all change in a second, which is why it is the best support for its customers.

Since the late 80's Constant

Constant Power Services has worked extensively towards providing a total power

solution having installed numerous generator and Uninterruptible Power Supply (UPS) packages complete with associated switchboards for distribution and auto changeover facilities. Constant Power Services Ltd has also consolidated its position as a major UPS supplier to Hospital and Healthcare authorities.

Finding smart ways to help customers to manage their operations is always at the forefront of the company's mind, which is why many of its clients have stayed with them for over 20 years. Its portfolio consists of a range of products from smaller 700va UPS to 6.4mva systems, containerised units for hire or purchase, generators, switchgear, and maintenance contracts. Its turnkey offers and solutions are tailored to all requirements, and working with customers requires great communication, respect and ownership of a task, a solution, or in some cases a problem to fix.

With the head office based in Letchworth and another office by Canary Wharf, Constant Power Services Ltd has recently expanded its offices with the addition of office and storage facilities in Scotland. Located between Glasgow and Edinburgh this new edition to the business means that it is able to provide a swift service to its customers. The company also brought new service engineers on board to support new and existing customers.

The company has now implemented the back office service function onto its existing Salesforce customer relationship management platform, in order to align all customers interactions for sales, service and remedials onto this one platform. This both eliminates duplication and the chance of human error.

Constant Power Services Ltd also has a new containerised rental solution. The MultiBox 800 containerised solution utilises the high-performance Next Energy UPS Systems to provide a reliable, clean & uninterrupted Emergency power source. A compact 20' ISO container, houses an impressive 2 off 400kW UPS systems, 2 off dual string battery systems, associated switchgear,



air-conditioning and general lighting and small power. These containerised solutions are perfect for sites undergoing upgrade works or replacements.

The MultiBox 800 also helps to optimise space within a facility, eliminating the need for dedicated and controlled environments within data centres and plant rooms. Clients simply have to locate the container externally to utilise internal floor space critical IT Infrastructure.

It is also available for both permanent installations as well as short and long term rental agreements. Renting will avoid the higher capital costs, and provides peace of mind that the equipment is fully monitored, maintained and inspected by Constant Power Services Ltd for a fixed monthly fee with no risk of any additional or unexpected costs. Alternatively, a purchase investment can provide an effective emergency solution; conveniently deployed to various sites as and when required.





been very positive. As companies have developed their knowledge and understanding of their critical loads and how losing power can impact their businesses even for a short amount of time, the last 12 months has seen the business grow even with the current supply issues. It has managed to deliver all projects successfully in a timely manner maintaining a great dialogue with customers.

Kevin continued, "2022 Sales are very positive and growing, and the company is on track for its 2025 growth target. We are very active and with a renewed vision and focus we are building a company that focuses on providing the best support to our customers."

In what is a congested marketplace, Constant Power Services Ltd works hard to meet all of its customer needs. As Kevin remarked, "components can be sourced from the same place, product can be built in the same way but to truly stand out, it must be the service, customer care and really listening and understanding what the client requires that makes all the difference. We support our clients through all stages of their journey from the thought of



Constant Power Services Ltd is a successful company because it prides itself on being able to support businesses with their critical power requirements. Managing Director Kevin Wilson commented, "for us it is not just about the product, it is about providing the customer with what they actually need and to support them on their journey through decision, purchase and then service or maintenance. Our four and seven year remedial servicing plans perfectly reflect this idea, as these services increase the longevity of the product and ensures optimum performance of the equipment."

Following the years of challenge that COVID-19 provided for so many businesses, including Constant Power Services Ltd, the last 12 months have

needing or requiring a UPS, through to installation and servicing. As some of our customers have been with us for over 20 years, we feel that this demonstrates our ability to support them long term." Indeed, Constant Power Services core ethos is to give support, and it does that with great honesty and openness in order to create a long term partnership with our customers.



Looking to future plans,

Constant Power Services Ltd aims to continue its excellent service, and the company is seeking to be the number one support for businesses seeking quality uninterruptible power supplies. Over the longer term, it is looking to expand its remedial and service options and to enhance all turnkey full systems solutions.

Kevin concluded, "It is a great honour to have been selected for this award by Industry Update. To be recognised and awarded for something that comes naturally to us is simply fantastic, the team at Constant Power Services are thrilled. If you are looking for an UPS for a new building, have inherited a UPS from a new acquisition or are simply wanting to upgrade to a new system so that you can get the service and support you require, Constant Power Services is the company for you."

For more information:

T 0330 1230125 sales@constantpowerservices.com www.constantpowerservices.co.uk



Test & Measurements

Interface Force Measurements: Force, torque and pressure measurement

nterface Force Measurements has been supporting UK industry with the highest quality force, torque and pressure sensors for more than 25 years.

You can benefit from our experience whenever you contact us about your next measurement application, experience gained helping designers and engineers across multiple industrial sectors.

We'll use our experience and product knowledge to help you select the best sensors for your application from our wide range of sensors from some of the world's best sensor manufactures, including

▼ Interface Inc – single, dual, 3 and 6 axis load cells and torque transducers AMTI – six-axis load cells and force plates

- ▼ GP50 pressure and temperature sensors for oil/gas, aerospace, automotive food/ beverage and general industry
- **DDM** miniature pressure sensors for automotive R&D XSensor – pressure mapping systems for bed/ mattress, seating, automotive R&D, tire testing applications and impact testing for seats, airbags, helmet and protective equipment

We can also help with your data collection needs with our range of

amplifiers, displays and software what will work with our and other manufacturers' sensors

So, if you have a force, torque or pressure measurement challenge that you'd like our help with, please contact us.

Contact T 01344 776666 info@interface.uk.com www.interfaceforce.co.uk interface The World Leader in Force Measuremen

Current lead times from 7 working days

Recent months have highlighted again the issue some Supply chains are having. It doesn't matter where you're operating, whether you're in the UK, the US, or elsewhere, we all have global supply chains now, and that is where the disruptions are.

We know that getting the right gas safety tools and equipment when you need them is becoming increasingly challenging due to supply chain challenges. Crowcon is dedicated to providing safety, health, and environmental technologies to support organisations across multiple industries. We know that you shouldn't have to wait to ensure you're safe at work or ensuring your people are safe. That's why we're dedicated to having readily available products when you need them most.

With a wide range of portable and fixed gas detection solutions, we can help find the right detector for you, no matter your application or industry

Personal CO monitors and flue gas analysers are also available at a reduced lead time for all HVAC engineers

Our lead time for portable detectors and flue gas or combustion analysers is 7 working days. With fixed detectors available from 7 working days.

Contact CROWCON www.crowcon.com quotes@crowcon.com Detecting Gas Saving Lives

Crowcon extends their product range to include the T4x multi-gas detector

rowcon Detection Instruments Ltd have extended their product -range to include the T4x multi-gas detector. Exclusively with long-life O, and Molecular Property Spectrometry (MPS[™]) sensor technologies, along with a dual toxic sensor, the capability of the T4x portable gas detector to improve worker safety and cost less over time has been enhanced.

Gas sensors are primarily optimised for detecting specific gases or vapours through design or calibration. Personal safety monitors often combine several sensors for protecting the user against specific gas risks. However, a 'Compliance 4-Gas monitor' comprises sensors for measuring levels of carbon monoxide (CO) hydrogen sulphide (H₂S), oxygen (O_3) and flammable gases; normally methane (CH_4) in one device. The T4x monitor with the ground-breaking MPS[™] sensor is able to provide protection from CO, H_2S , O_2 risks with accurate measurement of multiple flammable gases and vapours utilising a basic methane calibration.

Our new and improved T4x portable multi gas monitor you can take almost anywhere. Offering compliance and low cost of ownership in a simple to use solution. To ensure ongoing reliability and accuracy of the T4x detector, the detector utilises the MPS™ sensor functionality within its robust unit that provides a range of features to ensure safety. It offers protection against the four common gas hazards: carbon monoxide, hydrogen sulphide, flammable gases and oxygen depletion, the T4x multi gas detector now comes with improved detection of pentane, hexane and other long chain hydrocarbons. It comprises a large single button and easy-to-follow menu system to enable ease of use for those wearing gloves, who've undergone minimal training. Tough, yet portable, the T4x detector features an integrated rubber boot and an optional clip-on filter that can be easily removed and replaced when needed. These features allow the sensors to remain protected even within the dirtiest environments, to ensure they can constant. A unique benefit to the T4x detector is that it ensures toxic gas exposure is calculated



accurately throughout an entire shift, even if it is switched off momentarily during a break or when travelling to another site. The TWA feature allows for uninterrupted and disrupted monitoring, so when powering up, the detector begins again from zero as if starting a new shift and ignores all previous measurements. The T4x allows the user the option to include previous measurements from within the correct time frame. The detector is not just reliable in terms of accurate detection and measurement of four gases, it is also dependable due to its battery life. Enhanced battery life of 35+ hours battery life (double the battery life of our original T4) allows multiple or longer shifts to be worked between recharging.

T4x helps operations teams focus on more value adding tasks by reducing the number of sensor replacements by 75% and increasing sensor reliability. Through ensuring compliance across site T4x helps health and safety managers by eliminating the need to ensure each device is calibrated for the relevant flammable gas as it accurately detects 18 at once. Being poison resistant and with battery life doubled, operators are more likely to never be without a device. T4x reduces the 5-year total cost of ownership by over 25% and saves 12g of lead per detector which makes it much easier to recycle at the end of its life.

Overall, through the combination of three sensors (including two new sensor technologies MPS[™] and Long-life O₂) within an already popular portable multi-gas detector, Crowcon has enhanced the safety, cost-effectiveness and efficiency of individual units and entire fleets. The new T4x offers longer life with a higher accuracy for gas hazard detection whilst providing a more sustainable build than ever before.

Contact www.crowcon.com guotes@crowcon.com

The world leader in force measurement

nterface Force Measurement Solutions (Interface) is a UK company specialising in the supply and distribution of high-quality sensors and associated electronics and displays for a wide variety of industries. Working previously with clients such as Airbus, **BAE Systems, and Formula One Teams,** we spoke with Tony Rokins, Business **Development & Pressure Mapping** Specialist, who explained some of the companies well known products.

"Our product portfolio is applicable to



many industries For instance, we are well known for our high-quality pressure mapping systems that are used by many of our automotive and motorsport customers. Our sensors deliver highly accurate, repeatable measurements and many of our load cells are used by calibration houses as calibration reference devices. Our high-quality, yet competitively priced 3 and 6 axis load cells are used for many R&D, renewable energy and robotic applications." Reflecting on last

adversity from COVID-19. Fortunately, its sturdy business model and reliable service has enabled the company to pick up the pace and continue projects that were left postponed. "Trading conditions have been tough, but business levels picked up strongly towards the end of the year. I think we came out of it stronger than we could have reasonably expected."



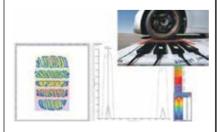
In terms of recent developments, Tony continued. "We've taken some time to review our business model, how we operate on a day-to-day basis. Being responsive to our customer's needs and being able to offer a high-quality product with strong product knowledge at a competitive price with the best possible lead times is our number one priority.

2021 also welcomed the launch of the G-Series Load Cells. The range comprises of miniature and small sensors for industrial applications, with capacities starting from just 4.5N Newton up to 200kN with metric threads. "These are high-performance devices but aimed at more cost-conscious applications. This is a new market for us, but we are seeing increasing interest. We are launching an e-commerce website for the G-Series in the next couple of weeks. Competitive pricing and availability from

stock will be key to this new venture's success," stated Tony.

In the future, Interface is keen to continue its growth trajectory for 2022. We asked Tony how he felt receiving the award and what their plans are going forward, he answered, "We work hard for our customers to offer the best measurement solutions. The recognition is greatly appreciated. Long term, we are strengthening our position with our customers in our more traditional markets of aerospace, automotive, motorsport, Universities and alternative energy research.

We are also working on new, wireless force and vibration sensors for remote monitoring in systems such as luggage carousels. One more area we are pushing for growth is with XSensor's pressure mapping systems, particularly in the Hi-speed systems designed for high-speed impact or crash testing and tire foot-print research. These systems are capable of capturing data up to 2,500 frames per second. The tire sensor can be driven over at speeds of up to 140kph. I believe this is a unique capability we can bring to the industrv."



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Commitment To Excellence Because improvement never stops – continuously driving innovation creating cost and efficiency benefits

n this issue of Industry Update, we are pleased to announce Worthington Creyssensac as our Air Solutions Company of the Month.

The original Creyssensac company was founded in Nanterre, near Paris in 1934 by Elie Creyssensac and quickly became renowned in the automotive industry for developing high quality piston compressors. In the mid-1960's, screw compressors were added to the product portfolio, and 1973 saw the merge with Worthington. This further expanded the influence of the company in the compressed air world and reinforced its distributor network. Today, its long-standing experience and continuous innovation ensure that Worthington Crevssensac is a trusted partner for its customers.

The company is a world-renowned air compressor solutions provider operating globally, and it has production facilities located strategically to support the markets it operates in. For the UK and Ireland market, the company is supported by production and logistic plants in Belgium, Italy, Netherlands and closer to home in the UK.

Worthington Creyssensac's compressed air solutions include piston, rotary screw and oil free air compressors, and downstream air treatment including receivers, dryers, and filtration systems. Manufacturing such a broad range of compressors and air treatment using various technologies allows the company to provide a complete solution which meets the end user's requirements with the lowest life cycle operating costs.

In what is a very crowded marketplace, Worthington Creyssensac products offer a cradle to grave solution focused on life cycle costs to give the lowest total cost





of ownership possible, based upon capital purchase cost, energy operating cost and service operation cost. Product Specialist, Stewart Craig commented, "The variable speed drive models along with our

integrated permanent magnet (iPM) motors, take energy savings to the next level and with rising energy costs, guarantee a shorter payback period on investment than ever before. Our oil free solutions are ideal for industries where class zero air is required to prevent product contamination, such as food, beverage and pharmaceutical."

The company has recently launched a new range of oil free rotary tooth compressors in the UK & Ireland market, namely the

OF20-75V. Worthington Creyssensac is renowned for designing and manufacturing the most durable oilfree rotary compressors, and the OF series extends this strong tradition. Ideal for industries where high-quality oil-free air is key, the OF delivers the quality air that protects the safety and quality of your production.

The OF20-75 brings outstanding sustainability, reliability and performance to clients, while minimising the total cost of ownership also. Built to perform even in the harshest environments, these compressors keep production running efficiently.

As Worthington Creyssensac looks to the future, Stewart continued, "We constantly strive for innovation, including developing the use of interior permeant magnet motors alongside our in-house designed Imperium VSD drive. We have also developed ICONS, our Intelligent Connectivity System. It is the connectivity solution that improves the machine's



reliability

and offers high operational efficiency. ICONS collects data from your machine to optimize the operation and energy consumption of your equipment.

For more information: T+44 1925 817803 www.worthington-creyssensac.com/en-uk



Company of the Month

Engineering systems and machinery for manufacturing industries

In this issue of Industry Update, we are proud to announce that we have selected CJ Waterhouse Co Ltd as our Machine Design Company of the Month.



Founded in 1992 by John Waterhouse, but rebranded in 2007. Newark based CJ Waterhouse Co Ltd is an engineering company specialising in the design and manufacture of bespoke materials handling, weighing and automation systems. Building on its extensive knowledge of materials handling solutions, the company manufactures a wide range of equipment including weighing, feeding, handling and automation systems to suit customers exact requirements.

CJ Waterhouse Co Ltd is working in the same market as other companies, but the company offers bespoke solutions to fulfil its clients' exact requirements. It does not have a standard range of equipment but instead, offers custom made solutions. It does this by listening to customers and fully understanding their manufacturing process and future production plans, to then provide tailor made system solutions to suit the



specific requirements in a way that other companies cannot.

CJ Waterhouse Co Ltd are currently developing the fourth generation Smart Cart System for a UK food industry manufacturer. The Smart Cart system is a fully automated minor ingredient weighing and bagging system which has been in operation both in the UK and Europe for a number of years.

The issue with traditional static weigher systems is that they can suffer from lower accuracy, contamination & slow throughput. The Smart Cart system overcomes these negative constraints by utilising mobile weigh carriages which travel upon a mono-rail track beneath an array of automated dosing stations. The system incorporates automated bag manufacture, placing, printing and sealing, and permits large numbers of material dosing stations together with multiple weigh carriages. This provides high throughput, high accuracy, and contamination free weighing of minor ingredient batches.

The 4th generation Smart Cart is still based upon the same principle of moving the weigh carriage to the material feed station but instead of using a track based system AGV's (automated guided vehicles) have been developed to transport the weigh carriages below the feeder array.

Working among the many sectors of the manufacturing industry including food and drink, polymer and plastics, and waste & recycling has enabled CJ Waterhouse Co Ltd to develop a wide range of solutions suitable to a range of sectors.







Owner Christian Waterhouse explained, "from standalone machines to total turn-key systems covering all aspects of mechanical, electrical and software solutions, we aim to provide a comprehensive service from concept to final commissioning, meaning that we can provide bespoke solutions across the industry."

During COVID-19, the company faced many of the obstacles that other companies struggled with, and Christian commented, "we suffered considerable financial impact due to non-progression of projects throughout 2020 and into 2021. However, the market is much healthier now and 2022 will be our best year to date, and we also have numerous potential projects set for 2023."

In the future, the company will continue to provide its customers with the best possible solutions to their materials handling and plant automation requirements with respect to technical specification, longevity and budget.

C J Waterhouse shall be exhibiting at this years PPMA show from 27th – 29th September where we shall be introducing our 4th Generation Smart Cart. We shall also be joined on the stand by one of our partner companies, Cidiesse, whom manufacture swing bin elevators. Please pay us a visit on Stand E42.



For more information:

T 01636 610792 sales@cjwaterhouse.co.uk www.cjwaterhouse.co.uk

Industry Update is sponsored by CPL Activated Carbons – see them on page 24

Print & Packaging

Increasing number of (small) parcels? No problem for EuroSort



Post and parcel companies all over the world have seen their volumes increase and the mix of products change from letters to parcels. This leads to new challenges when sorting all these parcels. Whether it is the limitations of your current equipment, throughput or of existing floorspace, there is a solution.

Due to increased online shopping globally there are more parcels being shipped than ever before. These range from rectangular boxes to small, light and irregularly shaped parcels. Where in the past postal companies often opted for cross-belt sorters due to their high throughput, this equipment is not capable of handling the full mix of parcels with high accuracy and often parcels would fly out of corners and, worst case, would get damaged or lost. This leads to unsatisfied consumers.



The ultimate solution: a Dual Split Tray Sorter

Some of the world's largest post and parcel companies have already recognized this issue and have switched to a EuroSort Dual Split Tray Sorter (a.k.a. Bombay sorter). Being able to handle anything as small as a business card up to packages measuring 750x450mm, the Dual split tray sorter can easily handle up to 20.000 items per hour.

The big advantage of the system is that due to the tray design there are no items flying out in corners, massively increasing your sorting accuracy. The Dual Split Tray Sorter can be fed automatically by top- or sideloading as well as manually for the smaller items that you don't want to lose on an infeed line. It is often equipped with barcode scanning, weighing or if required integrated with an OCR system, but the possibilities are endless.

Smart design for more destinations Because the split trays are opened fast, each



item – small or large, flat or round – will be dropped at the right destination. With smart chute design, such as flaps to close the chute when a container is switched so sorting can continue, EuroSort is able to create even greater efficiencies. Furthermore, by making use of our advanced chute technology it is also possible to increase the number of exits on the same footprint. Our customers are experiencing the Dual Split Tray Sorter as the ultimate solution for post and parcel sortation: High throughput, high accuracy, small footprint. Contact us today to find out more:

T +31888877425 info@eurosort.com www.eurosort.com





Print & Packaging

PET recycling label innovation

CL Label, the world's largest converter of pressure sensitive and extruded film materials for decorative, functional and information labels, has unveiled a new generation of their EcoStream® labels that support the recycling of PET bottles at a very high quality level.

They are made from floating low-density polyolefin material that separates very easily from the heavier PET flakes in the sink/float process step at the sorter and recycler – which results in the vield of clean PET flakes that can be recycled back into new bottles,

closing the loop.

"The official endorsement by both the European PET Bottle Platform (EPBP) and the Association of Plastic Recyclers (APR) in the United States underpins the performance of the label in the recycling process and the compatibility with existing recycling streams and technology," says Reinhard Streit, Vice President and Managing Director Food&Beverage Europe at CCL.

The EcoStream[®] SP (Shear Performance) clear & opaque white pressure sensitive label is a further development of the existing EcoStream version, that



beverage market for many years.

Freshly blown and immediately labelled bottles can induce folds or bubbles on regular labels. EcoStream®



SP pressure sensitive labels are developed to keep perfect labelling through flexible properties in particular suitable on post-shrinking PET bottles.

All other valuable properties of basic EcoStream® labels are maintained unchanged and allow perfect and clean separation without contamination or discolouration neither of the washing bath nor PET-flakes.

For more information, contact us at: beverage@cclind.com

Recyclable pouches join the family of McCoos



ow can a recyclable pouch possible do justice to the Steven Brown Art's - the McCoos

When Deans of Huntly wanted to launch their range of Cookies in a recyclable pouch they approached National Elexible for ideas. They had the designs which are incredible. incorporating Steven Brown Art's McCoos but were worried that a recyclable laminated pouch wouldn't do the designs justice as some recyclable materials can have a 'dull' finish similar to polyethylene.

National Flexible had already had extensive experience of recyclable films and pouches and were able to help. The pouches needed to have intensity of colour not only in the main design but also in the photographs of the small packs on the front.

"We needn't have worried. National Flexible understood exactly what we wanted to achieve. We are extremely happy with the pouches they look amazing!" Michael, Deans of

T 01274 685 566 sales@nationalflexible.net www.nationalflexible.co.uk

New recyclable **OPE/PE** laminate with barrier for hot fill sauces

- Barrier OPE/PE laminate to replace existing PET/
- PE-EVOH-PE
- Excellent for condiments, liquids and those with particulates
- Runs on existing packing lines



Trials available now

For more information: T: 01274 685566 www.nationalflexible.co.uk sales@nationalflexible.net

Advanced Materials Review

The UK's largest ever advanced materials exhibition and conference

The Advanced Materials Show is the must-attend free exhibition and conference that brings together a highly focused audience, all involved in the research, production, purchasing or integration of advanced materials technology including Graphene & 2D Materials, Composites, Polymers, Coatings, and Ceramics.

The 2022 show returned to the NEC, Birmingham on the 29th & 30th June to showcase an abundance of the latest high-performance materials technology and for the first time ever joined together with Battery Cells & Systems Expo and Vehicle Electrification Expo. The Advanced Materials Show and Ceramics UK conferences' blended programme featured two tracks tackling the challenges and opportunities in materials innovation and materials industrialisation.

The program was held in one exhibit hall that showcased

technology and innovation from over 300 companies, as well as sessions on composites, coatings, lightweighting materials, sustainability and additive manufacturing - with applications and case studies featured in aerospace, automotive, construction and semiconductors amongst others.

Just some of the noteworthy show features included the graphene round tables, IP session and drinks reception which offered an exclusive opportunity to sit down with peers and experts to discuss barriers and opportunities within these sectors.

Make sure to get your tickets for next year's event taking place on the 28th & 29th June 2023 at the NEC in Birmingham.

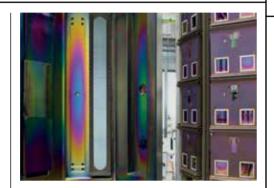
www.advancedmaterialsshow.com

Gencoa

Gencoa provide components and expert solutions for all applications in the field of vacuum coating, with all stages of the plasma deposition process covered by the products and services supplied.

Manufactured products include plasma pre-treatment and ion sources, planar and rotatable magnetron sputter cathodes, and instruments for process control and gas analysis – including Optix, a multi-purpose gas sensor capable of operating without differential pumping.

Complementing the range of manufactured components, Gencoa offer coating development services for process design, source development or performance improvements. In-house capabilities ensure a prompt turnaround and productive results. Typical areas include all aspects of the coating processes including layer stack development, simulation of processes and system magnetic field arrangement, surface plasma treatment methods and performance improvements to existing sputter sources.



From basic research small runs to pilot production, utilising glass, plastic, or metal substrates, our experienced team can deliver coating services for applications including antimicrobial, antireflective, transparent DLC, glass, decorative and automotive.

For more information on how Gencoa's products and services can deliver solutions to meet your coating requirements, contact sales@gencoa.com or visit www.gencoa.com

Global experts in humidity control

DST Humidity Control are world leaders in industrial desiccant dehumidification systems. Boasting over 45 years of experience in providing dehumidification solutions to the UK market, DST Humidity Control is a member of the Seibu Giken DST worldwide group of companies to which it continues to embrace the same principles as its parent company to provide efficient, exceptionally well-engineered dehumidifiers of superior quality.

Certified as an ISO 9001:2008 company, DST Humidity Control have both a standard range of 'off the shelf' desiccant dehumidifiers and bespoke systems designed for both the commercial and industrial sectors. By using Flexisorb, each industrial dehumidification system can be tailored to suit all individual requirements. Using a completely flexible design, the standard D-Max Silica Gel rotor enables dew points to reach as low as -60°C in one single pass, and even lower dew points can be reached using their SZCR Zeolite rotor.

DST Humidity Control strongly believe in creating energyefficient control for DST Industrial Dehumidifiers which is why the company places so much importance on the economy and the environment. Using new technologies wherever possible, such as the programmable logic control

Prototal UK

Prototal UK have one of the largest additive manufacturing machine fleets in the UK, with over two decades of experience in the field. Our services help projects come to life at both the prototyping and production stages thanks to our renowned postprocessing department. From motorsport to aerospace, we manufacture parts in PA12 all the way to highperformance polymers (HPPs) such as PEEK and Carbon PA.

These HPPs are leading the industry in replacing metals thanks to their reductions in weight, production costs and lead time over other methods while maintaining performance in the face of high temperatures, high pressure, and corrosive chemicals.

Our modern technologies give projects a solution that is robust in terms of strength while remaining dynamic and agile for design iterations to be materialised quickly and effectively. This means that our customers have peace



(PLC) systems, improves operating efficiency, lowers carbon emissions and reduces running costs which are all factors that may be crucial for environmental certification.

These procedures, on top of its continuous investment in research and development, ensures DST Humidity Control's desiccant rotor remains the most technically advanced worldwide.

For more information, see below. https://dsthumiditycontrol.co.uk/



of mind when using our services as we ensure that their projects can go ahead smoothly and to schedule.

We offer finishes similar to injection moulding thanks to our vapour smoothing technology and can manufacture using SLS, FDM, SLA, Injection Moulding and Vacuum Casting.

For more about our services, please visit our new website www.prototaluk.com or contact us at info@ prototaluk.com or on 01635635855

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GERMANY

stirring tool, ensuring almost one hundred percent degassing

when mixing compounds with extreme high rotation values,

harnessing centrifugal forces that were previously considered

C Hauschild SpeedMixer

German-made Hauschild SpeedMixer[®] innovates the market of laboratory mixing with smart functions. These SMART DAC devices are distributed directly in Europe and USA – These enhance our world leading DAC SpeedMixer instruments known for decades which are still manufactured and available to order.

A Hauschild SpeedMixer[®] is a programmable dual asymmetric centrifugal (DAC) mixer for laboratory work and small production quantities. They offer fast mixing and grinding of materials that would otherwise take a long time. When mixing temperature sensitive materials, a real-time temperature control or cooling of the mixture is needed. Our new series Hauschild SpeedMixer[®] SMART DAC come as both Vacuum-Capable and Robotic with sensor integration for temperature, gas etc., variable counter rotation, Internet of things compliance, QR-code reader, remote control, and automatic pot cooling system which are absolute novelties in the field of laboratory mixers.

"There is no better way to obtain a homogeneous mixture of dis-similar materials than DAC mixing", explains Fabio Boccola, CEO of Hauschild Engineering, the pioneer of this technology. "Such a dual asymmetric centrifugal mixer works without a

Powering the electric vehicle revolution

A rig to advance training on hydrogen fuel cell systems, Athe first of its kind in the UK, is due to be unveiled at MIRA Technology Institute (MTI) as it prepares to launch skills training in this emerging clean technology set to help power the electric vehicle revolution. Training will lead to qualifications for technicians at Levels 2 and 3 as well as CPD accredited by the Institute of the Motoring Industry (IMI).

Lisa Bingley, Operations Director for the MTI said, "We are currently working on developing the content and specification for these courses in accordance with national occupational standards to support awareness and understanding of how hydrogen fuel cells work. We are also working towards offering higher level programmes that will help technicians learn how to diagnose and rectify faults in these systems and remove and replace essential components."

The MTI is helping to create specialist skills in some of the new emerging technology areas including electrification and driverless cars. Since it first opened its doors, the MTI has welcomed over 32,000 students and delegates. This includes over 1,100 studying for accredited qualifications



from Level 1 up to Masters' degrees, and over 700 following apprenticeships at all levels. More than 10,000 automotive professionals have taken part in professional development activities.

For further information please contact Susan Bexson: susan@birdboxpr.co.uk T 07786 434818

IKA's new reactor system for chemical synthesis

asySyn is the new reactor system from IKA for organic or aqueous synthesis. It is the only reactor system on the market for which all components are available from a single source.

EasySyn is a medium-sized and very flexible upscaling system. It ensures safe and reproducible chemical reactions when transferring from laboratory to process scale.

A unique feature of EasySyn is that the reactor, stirrers, thermostats, vacuum pumps and laboratory software were developed by the same manufacturer. This means that everything is perfectly coordinated. Added to this is the ergonomically designed stand. It enables a comfortable working posture and facilitates the change of vessels, the alignment of the stirrer and the draining of reaction solution and temperature control liquid.

In the pre-production stage, EasySyn offers a wide range of applications: reflux condensations, reactions under vacuum, crystallizations, (pH-controlled) precipitation reactions, nanoparticle or catalyst syntheses, and the transfer from laboratory to process scale. Likewise, the controllable and

Malvern Panalytical

Malvern Panalytical technologies are used by scientists and engineers across a wide range of industries and organizations to solve the challenges associated with maximizing productivity, developing better quality products, and getting them to market faster.

Our mission is to create superior, customer-focused solutions and services that deliver a tangible economic impact by enabling chemical, physical, and structural materials analysis. Underpinned by extensive industry, technical, and applications expertise, our instruments help users better understand a wide variety of advanced materials.

All advanced materials start their life in the research lab. Specific additives, coatings, or treatments are synthesized or formulated, tried and tested, to assess and improve performance. Our solutions are used to determine the structure and properties of advanced materials and their components at the atomic and molecular level through to the macroscopic scale. These include technologies for assessing chemical composition, molecular weight, particle size, and crystal structure.



reproducible reaction conditions make EasySyn ideal for applications in research and development, the chemical industry or materials research.

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In this way, our instruments help solve challenges in applications including semiconductors, batteries, nanomaterials, additive manufacturing, and fuel cells. For instance, the cathode materials for Li-ion batteries and the high-brightness LED were developed using our equipment, demonstrating the impact our high-quality material characterization tools can make. And of course, we can also develop customized solutions for you, to create unique instrumentation for cutting-edge research.

You can find us at the 2023 Advanced Materials Show at stand 1219 in the Battery Cells & Systems Expo section – we look forward to seeing you there!

www.malvernpanalytical.com



Advanced Material Review

Williamblythe

A global supplier of high-performance specialty inorganic chemicals serving the catalysis, polymers additives, gas absorbent, life sciences, electronics, and renewable energy sectors. William Blythe has commercialized a new range of advanced material products, including graphene oxide, near-IR absorbers and energy storage materials, supported by a leading R&D department and investment from its parent company, Synthomer plc

Graphene Oxide

William Blythe are one of the leading manufacturers of graphene oxide globally. Since opening its web shop in 2016, GOgrpahene, the company has worked with organisations to develop their applications with its high purity, high performance graphene oxide. As a result of increased customer demand, the company transferred production to plant scale early 2022, and is now operating at a 50-tonne/year capacity.

Near-IR Absorbers

"need to know".

The LuxacalTM product range consists of nano-doped tungsten oxide materials that can be tuned to absorb across the near-IR, UV and visible range. Applications include additives for glass

complexity...

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For the FALCON 5000G2, INNOVATEST recommends the

software, limited to the level of "need to have" and

Dwide range of standard functionality such as

coating for thermal control glazing and de-icing paint additives for wind turbines, road markings etc.

Energy Storage Materials

The purpose of software is to control

William Blythe has been developing materials for nextgeneration energy storage technologies since 2019. The company has an on-site energy storage laboratory used to develop both Synthomer's Litex LB SBR binder range and inorganic battery materials developed at William Blythe Products include solid-ion conductors such as LLZO and NASICON.



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We work with chemical and material innovators throughout the supply-chain, helping to secure intellectual property rights and build portfolios that protect and enhance their business.

Patent rights can prevent others from exploiting your efforts, developments and hard work, which increases

your company value and helps to secure a marketleading position. Our team can also provide knowledge of competitor patent rights to help you avoid infringement and stimulate new innovations to be turned into assets ensuring that you're always ahead of the game.

Our dedicated chemistry and materials team advises a wealth of clients in the UK and overseas including small, medium and large organisations, as well as universities and research bodies.

To find out more, contact Dr Martin Neilson at mmn@ udl.co.uk or connect with him at linkedin.com/in/ martinneilson

www.murgitroyd.com



Scanwel Group exhibited at The Advanced **Materials Show** Scanw

C canwel Group exhibited at The Advanced Materials Show. Dalongside our partners SPECS and IONTOF. The event was our first opportunity to showcase our enhanced product portfolio following the acquisition of Palatine Precision Ltd at the end of 2021. Palatine is one of the leading manufacturers of Edge welded bellows and has worked in that arena for over 50 years.

As well as our extensive product range of off-the-shelf parts purchased directly from our online shop, Scanwel provides bespoke solutions for your specific projects. Our team is highly qualified and experienced, approaching each project on an individual basis, offering a consultative approach to solve your problems

Our products find application in the production and development of advanced materials and processes in a number of high technology fields, including nanotechnology, microelectronics, storage media, energy production and bio-medical and basic materials research of metals, oxides polymers and coatings.

Our custom systems are exactly that, conceived and designed with your full involvement using our experience and the latest CAD packages.



Our distributed products include systems and components for surface analysis by techniques such as X-Ray Photoelectron Spectroscopy (XPS), Time of Flight Secondary Ion Mass Spectroscopy (TOF-SIMS), Scanning Probe Microscopy (SPM) and Nanoindentation.

Contact www.scanwel.com

Industrial Update

Medical Shops Achieve Surgical Precision with Deep Hole Drilling Automation

Medically speaking, cutting people open is dangerous. Today, physicians get around this problem by using modern surgical instruments to perform minimally invasive procedures, which make major operations into simple outpatient appointments. But to accomplish these feats of surgical science, manufacturers in the medical industry have to drill small-diameter holes through the entire length of slightly larger instruments. Thin part walls, intricate features, high surface quality and concentricity requirements, and extreme depth-to-diameter (D:d) ratios make these parts a challenge in production.

A typical laparoscopic surgical instrument is designed to direct tools, cameras and other devices into the body through the instrument using a guide wire. And to ensure smooth, reliable and accurate performance during procedures, highly precise hole concentricity is required at D:d depth ratios well above 100:1, a challenge even for dedicated deep hole drilling equipment.

With these challenges, it's no surprise that many manufacturers try to skip the deep hole drilling process altogether by farming out the work, but going to outside suppliers brings its own problems. Pre-drilled blanks might solve the deep hole drilling problem, but they have to be fed into the machine one by one,



defeating the whole purpose of using automationready Swiss-style machines. Meanwhile, cannulated bar stock allows shops to continue using their bar feeders, but it's very expensive - and the hole quality and O.D./I.D. concentricity rarely meet the needs of medical manufacturers anyway.

To overcome these challenges, medical manufacturers are turning to dedicated deep hole drilling equipment to finish instruments started on the Swiss-style machines. With an experienced gundrill operator, careful setup and a bit of finesse, the hole quality can be excellent, and it allows the Swiss-style machines to remain fully automated. The only remaining problem is part handling and transfer which introduces significant risks when the accuracy requirements are so high, and if the part has to be flipped to drill a stepped bore, that introduces more setup operations and more risk of human error.

What medical manufacturers need is a truly end-toend automated process that allows for an efficient single-piece workflow for surgical instruments - and some deep hole drilling OEMs, such as UNISIG, have engineered all the technology required to meet this goal. The result is a complete system that offers easily automatable, on-demand deep hole drilling processes for the most demanding surgical instrument applications: the UNE6-2i.

As a twin-spindle machine with two independent drilling axes, the UNE6-2i inherently has the capabilities manufacturers expect from a highperformance deep hole drilling machine. Counterrotation, specialised workholding and superior alignment and precision allow shops to confidently hold concentricity tolerances and minimise mismatches, even at the extreme D:d ratios common



in the medical industry. In addition, the UNISIG Smart Control Interface simplifies operation, while an innovative flow-based coolant system automatically reacts to pressure changes for effective chip evacuation and high process security.

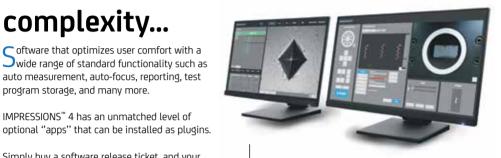
What allows the UNE6-2i to truly shine as a part of the surgical instrument production process, however, is the in-machine automation. After the front spindle drills the first hole, a robot takes it out of the spindle, puts the hole onto the second spindle, and loads another fresh blank into the first spindle. The robot's perfect repeatability ensures the highest hole quality - and the only human labour required for the process is loading bar stock into the Swiss-style machines, preparing the blanks for the UNE6-2i's robot and sending the finished

parts on for post-processing.

The UNE6-2i's capabilities also give manufacturers significant production flexibility. Two holes with two different diameters could be simultaneously drilled in a single part, or two parts could be in-process simultaneously to allow operators or robots to load and unload the machine without stopping. Alternately, this twin-spindle configuration can be used to drill halfway through a part from one end with the first spindle and allow the second spindle to finish the hole from the opposite end.

Contact

www.unisig.com



27" landscape screen operated by both touch as well as mouse and keyboard. One screen is standard with the hardness tester, optional is Dual View with 2 x 24" landscape screens.

New "apps" are added to IMPRESSIONS[™] on a regular basis; while INNOVATEST provides 10 years free updates, upgrades to more functionality or new additions can be purchased at any time.

www.innovatest-europe.com www.youtube.com/c/Innovatesteurope

Handling & Storage

The world's first 100% recycled white plastics flooring systems

In this issue of Industry Update, we are proud to announce we have chosen to present Abacus Flooring Solutions with our Outstanding Achievement Award for its Specialist Resin Flooring Solutions.

Abacus Flooring Solutions has received a number of awards and accolades over such a short time and its award portfolio boasts many remarkable achievements for the company and all involved. Going above and beyond for every single customer, both in terms of service and quality of work delivered, Nick only had positive things to say about their success. "It's great to be celebrating today with another award, we have won two awards in our first two years and this time it's for Outstanding Achievement. This award is only made possible with the support of our wonderful customers, staff and suppliers. We are consistently searching for the

highest levels

care every day

and, on every

project, and this

award is a great

reflection of the

work undertaker

to entrench our

position as an outstanding

resin flooring

specialist."

For over 30

years, Nick has

been involved

of customer



in installing industrial resin flooring across a wide range of commercial and industrial environments. It's this experience that has ensured its market leading position, offering the latest products, technologies and bespoke solutions to its customers.

"We have built up a fantastic portfolio across all industries, however, the British Manufacturing Industry will always be a key sector for us," stated Nick Megson, Managing Director at Abacus Flooring Solutions. Nick joined the industrial resin flooring industry in 1989, working for resin manufacturers and resin flooring contractors where he gained a great deal of knowledge and experience in both parts of the industry. Over his career, Nick has worked tirelessly to promote sustainability and the diversion of trade waste from being sent to landfill. After winning the industry's first environmental award in 2005, Nick went on to receive a number of other awards, with three of those being bestowed at the Houses of Parliament.

Nick established Abacus Flooring Solutions in July 2020, to offer resin flooring solutions across the UK. The company has enabled Nick to continue striving towards delivering environmentally friendly systems as all Abacus flooring systems are manufactured using up to 48% post-consumer recyclates.

The company has grown quickly over the past two years, to which its employees and customers have contributed greatly

towards. "Caring, Service, Future. We care for our employees, sub-contractors, and customer's needs. We offer a service where each member of our customer care team is trained to not leave customers waiting and will return quotations within 24 hours. We will endeavour to continue to build a business that we can leave for the next generation, so they all have a future," stated Nick.

Based in Leicestershire, Abacus Flooring Solutions is geographically best placed to reach customers from all over the country. Being able to offer such a unique service underpins the reason why customers stay with the company for many years. "I believe our continued customer service is quite unique, moreover, I'm proud to state we are the only company in the world who can offer a flooring

system made using 100% recycled white plastic. That fact really sets us apart from any competition," said Nick.

Nick researched and designed a floor screed that can be used in the resin flooring industry, which instead of using silicone aggregates, is made from recycled white plastics. Compared to silicone aggregates, its less eco-friendly alternative, Abacus's recycled solution instead creates an epoxy selfsmoothing screed that works extremely effectively and is



made from items such as toilet seats and light switches. By using white plastics otherwise destined for landfill, Abacus were able to form a screed which has since revolutionised the industry. Marked as a world first innovation and a very proud landmark for Nick and his team, sustainability will always remain at the heart of the company. "As the Industry Ambassador for Recycling since 2005, and a Director of our Industry Governing Body, FeRFA, I feel I provide a large amoun of my time helping and advising, marking the company as a real asset to our industry," stated Nick.

Starting the business only four months into COVID-19, Abacus Flooring Solutions has gone above and beyond just survival and has surpassed with evidential ongoing growth. From such turbulent times however, Nick believes the company has learnt some valuable lessons that have evidently been

reflected through its recent success. "Starting the business only four months into the biggest pandemic known, meant we could sympathise with customers and learn to be patient. I feel that COVID-19 has made everyone a bit more patient and understanding."

Abacus Flooring Solutions offer a resin floor installation that you can rely on. From preparation to installation and after care, its team of highly skilled and fully trained professionals are on hand to provide the advice and value required from initial contact through to a complete after care service.

From supplying coloured, high build coatings for light manufacturing areas, to busy, pedestrian filled food halls in retail environments, resin flooring can be applied to a range of industries. Abacus Flooring Solutions offer a full range of different systems from coating through to screeds that are specific to the environment to which it will be installed into. What's so unique about its flooring system is that it uses recycled plastic in lieu of quarried materials, which are good, safe materials that would usually just be going to Landfill. This sustainable system negates the need to dig up more land when looking for minerals to be used in the flooring. However, customers can certainly expect more than just a delivery of a resin

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floor. Nick has served on the Resin Flooring Association (FeRFA) Council for a number of years, making him uniquely placed in the industry to bring a wealth of knowledge and invaluable experience to every project.



In closing, we asked Nick what the plans for the business were going forward, he a

going forward, he answered, "To build the business so it is sustainable whereby 50% of the business can be employee owned."

For more information, please see below:

T 01530 432790 nick@abacusflooringsolutions.co.uk www.abacusflooringsolutions.co.uk





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Handling & Storage Aico launch new and improved HomeLINK App for Residents





C eeking to empower residents to create safer Dand healthier homes, Aico, the European Market Leader in Home Life Safety, has launched the third iteration of the HomeLINK App for

Residents. The app provides an innovative solution to some of the housing sector's biggest challenges, such as damp and mould and poor indoor air quality, allowing residents to take the

first steps in improving their home's health.

The app is a complementary addition to Aico's HomeLINK Internet of Things (IoT) platform, which includes a network of fire and carbon monoxide alarms, environmental sensors and the Ei1000G Gateway that connects them all. Designed to provide residents with detailed information about the health and safety of their home, the app provides users with hints, tips and recommendations to better their home's



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new features

indoor environmental conditions, in turn, improving their own health and wellbeing.

For example, with the improved core features, residents will receive notifications and recommendations, detailing how to reduce the risk of allergens, mould and indoor air pollution besides fire alarm testing reminders. Through real-time information, residents will see a breakdown of carbon dioxide, temperature and humidity conditions within each room, followed up by educational information to understand their home better. A game-changing new feature with the opportunity for enhanced care provides residents with the ability to invite others to app, so that their family members, carers or friends can also access the information to support the resident in following the healthy home recommendations.

Innovation is a key part of Aico's ethos, and their colleagues at HomeLINK are at the forefront of the research and development for the HomeLINK App for Residents. Taking this to the next level, residents can now trial new, experimental features via the app such as different design elements, allowing HomeLINK to directly collect feedback and quickly implement better user experiences.

Amrita Poptani, Product Manager at HomeLINK comments, "One of the things we noticed early on was how the tiniest thing could affect the moods, perceptions and overall mental health of the resident when using the app. With this in mind, we ensured elements of the new user experience were fun, exciting and light without taking away from the seriousness of the information. And while it's always a work in progress - this new version not only lays the foundations perfectly but it's also 'very snazzy', as one of our resident-testers put it!" To date, Aico have brought their HomeLINK connected, smart home solution to over 22,000 socially rented homes in the UK and this number is increasing

exponentially, with over 136,000 devices installed, encompassing a Gateway for each property with a set of connected alarms and environmental sensors.

To find out more about the HomeLINK App, please visit:

www.youtube.com/watch?v=8b86NzBJ7X8 To find out more about Aico's HomeLINK IoT

platform, please visit: www.aico.co.uk/smart-home/

For all the latest news please visit our website: www.aico.co.uk



Pumps & Valves

Hydrogen Valves go into production at Oliver Hydcovalves



Orders have started to roll off the production line for Oliver's NEW Hydrogen double block & bleed and ball valves. After months of research & development and meticulous testing at our purpose-built R&D facilities in the UK, the ball valve was passed and certified for Hydrogen application by Third Party Inspectors in July of this year.

Various DBB and single isolate ball valves with 14mm Bore Flange to Flange have gone into full production having taken another order, this time from Rockfin. Valves pictured here can be seen undergoing pressure testing on our recently installed state-of-theart test rigs, and are scheduled for immediate dispatch to Poland. The valves meet with stringent ISO 15848-1:2015 Tightness class B certification including ISO 5208:2015 zero seat leakage rate A. This has been achieved with precision engineering and providing a high-quality seal face finish.

For more information on Oliver Hydcovalves range of hydrogen valves or to discover more about Oliver R&D capabilities, please contact Nick Howard or Rob Porter on 01565 654 089 or email: sales@valves.co.uk | www.valves.co.uk





SWEP launches FI22AS - high efficiency condenser and evaporator with low global warming impact for reversible heat pump systems

This heat exchanger has been designed to match the rapidly increasing demand for residential heat pumps with high efficiency, low refrigerant charge, low water pressure drop and high asymmetry grade leading to a small carbon footprint.



With countries across the world seeking to move from fossil fuelled heating systems to both Air to Water and Ground Sourced Heat Pumps, the FI22AS is set to find a sizeable market.

The heat exchanger has been developed with SWEP's patented AsyMatrix2 technology as well as new innovative distribution system to deliver high thermal performance while ensuring a low secondary side water pressure drop. This makes it ideal for systems with demanding thermal and hydraulic requirements.

The FI22AS is optimized for the R290 and R32 refrigerants; R290 is a natural refrigerant which doesn't harm the ozone layer and has virtually zero impact on global warming, while providing excellent energy efficiency. R32 is a single component refrigerant, meaning it is easier to reuse and to recycle.

Anton Olausson, SWEP Segment Manager for Residential Heating, said

"The European market for heat pumps is now expanding significantly, with the rest of the world set to follow. The FI22AS, with SWEP's unique patented technology, provides a considerable boost to condenser efficiency coupled with improved efficiency in reversed evaporator mode. Together with its limited environmental impact, it is the ideal component for these changing times."

The FI22AS can be experienced at Mostra Convegno. Stop by the SWEP stand in Hall 22 – booth D31 E36 for expert talks and demos.

For more information: www.swep.net



- Needle valves, Check valves, Manifolds and DBB's to 22,500psi.
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16

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- Parallel slide gate valves, 3/8", 1/2", 3/4" and 1" (manual/hydraulic).
- Instrument products, check valves and relief valves.

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Company of the Month

Your one stop shop for Balers, Compactors and Crushers

n this issue of Industry Update, we are pleased to announce Landfill Alternatives as our Waste Machinery Company of the Month.

Landfill Alternatives have over 20 years of experience in the waste management industry, and during this time has established itself as a leading supplier of Vertical & Horizontal Balers, Waste Compactors, and dry waste recycling equipment. The company was established in 2003 by Managing Director Doug Barrons, and it is a family run business, with various family members working in different departments.

Based just outside of the small market town of Brackley, near Banbury, Landfill Alternatives is a specialist supply company that endeavours to tailor a waste handling





system to any site to achieve best value results. This can be done using standard, modified or built to order equipment. The company has supplied solutions ranging from customers with a small corner shop up to industrial multi-sites, and it supplies both machinery and services nationwide. The market leading machinery can process metal, cardboard, paper, foam, abattoir skins, film and rigid plastics, wood, and general waste

In addition to supplying all industries, from small part manufacturers through to large assembly lines and growers to packing plants, Landfill Alternatives also offer commissioning and training on all of their machines. They also provide a 'one-stop' shop approach where all waste matters, collections, consumables, invoicing and waste audits are supplied by them. Any company that has five or more wheelie bin collections per week will

have a requirement for their machinery.

Landfill Alternatives can also provide machine services and breakdowns, as well as coordinating waste collections and sourcing recyclers to rebate material, and equally importantly, it provides consumables on all machinery, including baler strapping and wire.

The company's machinery is meticulously designed and engineered to be safe, easy to operate and efficient to keep any business running smoothly, and their systems enable customers to minimise the waste sent to landfill and generate recycling rebates. Systems can be stand-alone, or part of a large 'turn-key' system using conveyors, bin tippers, and dust/extraction systems.

The waste machinery marketplace can be a crowded one. but Landfill Alternatives offers a large range of products





so the machinery that it provides to customers is more relevant to their requirements and objectives. The available machinery is simple and not over complicated with gimmicks, as that could lead to unnecessary faults. The range of machines supplied by the company are built to complete its indented purpose, with a long life span

Landfill Alternatives played a crucial role during COVID-19 because, as an essential business, it was required to continue supplying waste machinery and providing breakdown, servicing and managing waste collections, so apart from not being able to supply on site audits, business was not adversely affected.

For more information: T 01295 816 733 info@landfillalternatives.co.uk www.landfillalternatives.co.uk





Cereals Show Review The UK's leading arable event

Cereals is the leading UK arable event that took place on 8-9 June 2022 at Chrishall Grange, Cambridgeshire.

Farmers, agronomists and other industry professionals came together for the key event in the arable calendar which offered fantastic networking opportunities as well as some unique advancements in the arable farming sector that included the Winter Wheat & Barley Feature for side-by-side comparison, crop plots, NIAB Soil Hole, NAAC Land Drainage Hub and a sold-out programme of working demonstrations all in one field.

The 2022 show was incredibly successful hosting 320 exhibitors and sponsors, 17,000 visitors and over 200 working demonstrations. And, if that wasn't enough there were also three informative stages sponsored by AHDB, Farmers Weekly and

NAAC that hosted many talks and engagement opportunities to exchange knowledge with industry professionals such as James Bannister, Andrew Clarke, David Eudall, Jill Hewitt and many more.

The new Winter Wheat & Barley Feature was a curation of 26 popular winter wheats that included the representation from every breeder on the RL with varieties from all winter wheat groups 1-4. This gave the opportunity to visitors for the first time to walk amongst these in one place for side-by-side comparison.

For more information, see below. www.cerealsevent.co.uk



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Flower friendly Airrex AH-300 infrared heater solves greenhouse heating problem



hree years ago, in Finland, at the Munkkivuori Garden, it was considered how the premises would be kept warm and the flowers happy. The das heater didn't work, but the diesel-powered Airrex AH-300 was chosen as the right heating solution.

The garden has a smaller store section and a larger greenhouse. They very quickly bought another heater for their store section. The product has been very easy to use and works perfectly.

"We have been very pleased with these infrared heaters. On the greenhouse side, the heat is kept at just under

ten degrees Celsius and then at the store again at 13-14 degrees Celsius", says store manager Aki Lahtinen.

"Cost-wise, I can say that Airrex is much cheaper than gas heaters"

The AH-300 has a charm of comfort and the flowers are happy. The device is almost odorless and produces carbon dioxide, which is great in such an environment. The 15kW / h heating output is just optimal and the low fuel consumption has brought the desired cost efficiency. Workers do not have to worry about using the equipment, just refuel and let the heater do its job.

'Yes, these are easy to use, all you have to do is refuel. In terms of cost, I can say that it is much cheaper than gas-fired heaters", says Mr. Lahtinen.

Contact

www.rexnordic.uk

info@rexnordic.com



AgXeed products are now also commercially available in the UK

A gXeed showed its autonomous tractors in action tat Cereals for the second time. Equipped with standard implements such as a power harrow and a cultivator, it was possible to see how work in the field will look like in the future. AgXeed products will also be commercially available in the UK from this vear on.

AgXeed has appointed SoilEssentials as its sales and service partner for the north of England and Scotland. Further distribution partners will be appointed to ensure complete market coverage in the UK. The tour was followed by a tour of England and Scotland with live demonstrations at various locations.

AgXeed is focusing on compact autonomous units that are equipped with standard interfaces to carry out work in the field completely autonomously. All this with the highest precision, resource efficiency and low ground pressure.



If you have any questions, please contact SoilEssentials or AgXeed directly.

www.agxeed.com www.soilessentials.com



Agricultural Supply Services

sor

Agricultural Supply Services Cereals Stand farmers were much more positive and playing catch-up, having missed 2020 shows

Our Ouality PolyCool Cooling Pedestals & Moisture Meters - Unimeter, Wile, Perton & Sinar 'flew-off-our-shelves

We believe in looking after farmers' best interests, really understanding their needs. As part of the farming community A. S. philosophy is to provide what individual farmers actually need (which depends on many variables) based upon our experience, sometimes challenging their ideas.

Ever since WW2 farmers have followed their natural instinct to produce more yield, but having to treat soil like an incubator. On many farms

S .T. Gowan is an independent family business Specialising in the sale, repair and servicing of

Based in Bempton, near Bridlington, S.T. Gowan stock a wide range of high quality used agricultural

vehicles and equipment, alongside spare parts,

S.T. Gowan is a friendly, experienced and reliable

business which provide its customers with high

responsive service and value for money. Since the 1960's, S.T. Gowan has been supporting farmers

and domestic customers from across the region, as

well as local businesses in the fishing and caravan

quality machinery, first class workmanship,

wheels and tyres, in addition to a selection of

second-hand gardening machinery.

'ields have plateau'ed but costs still keep rising.

With changing weather patterns, especially at Harvest & Autumn planting, there's a limit on how much extra land farmers can take on and manage it well. Charles Goldingham believes farmers will need to become increasingly self-reliant.

Many farmers are improving their Soils structure, enabling roots to search for nutrients, reducing Farm Emissions. Agricultural Supply Services supply Soil Compaction Testers, CO2 & NH3 Respiration kits, pH, NPK testers to help fulfil farmer's objectives

Charles believes there is a great future for Farmers who can embrace the changes, and to look much longer-term than we have in recent years.



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Farmers have an indispensable role in society; farmers provide us not only with food but are also taking care of our environment. Our products will ensure that farmers get the time to do what they do best; farming and to handle the resources that have been given to us in a careful way.

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S.T. Gowan currently stock the following machinery: Fleming, Castle Garden, Oleo-Mac Garden, and is currently the official dealers for APV for the North East of England – offering a full range of new sowing, spreading and cultivation equipment, whilst providing spares, servicing and after sales support to customers across the UK

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Manufacturing & Engineering

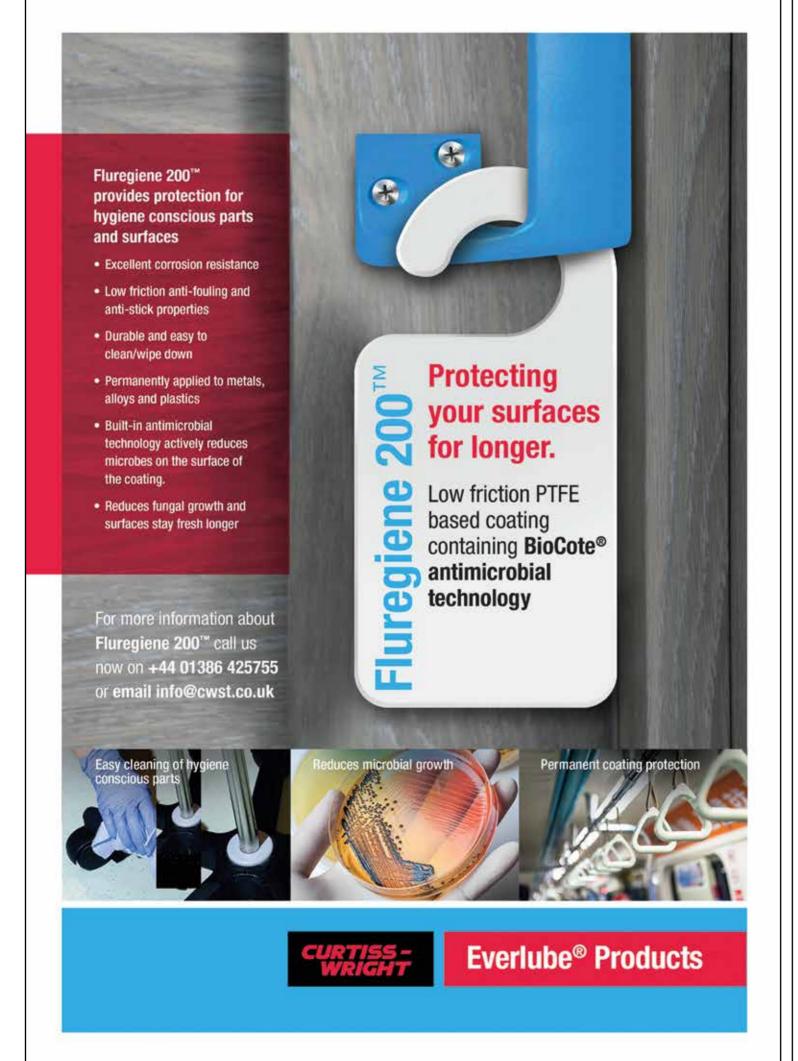
Bearing calculation methods

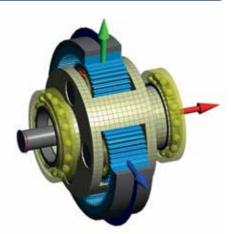
By Markus Raabe, MESYS AG, Zürich

Rolling element bearings are important components within transmissions. Usually, they are selected based on geometric restrictions, requirements on load directions and rating life. Rating life is mostly calculated based on ISO 281 using an equivalent load and the dynamic load rating from the catalog. Additional influence factors like lubrication and cleanliness can be considered in a modified life rating. The life rating restricts the maximum load. Regarding minimum load the bearing catalogs provide limitations in the range of 1-2% of the dynamic or static load rating as slippage can lead to wear or smearing. Using an equivalent load based on ISO 281, misalignment, moment load or bearing clearance are not considered.

A more detailed approach to calculate bearing rating life is provided by ISO/TS 16281. This cannot be evaluated manually as it is based on the load distribution within the bearing. By considering the load distribution additional effects can be included like misalignments, bearing clearance or fitting. Broadening this approach allows housing deformations to be considered, which will also affect the load distribution within the bearing.

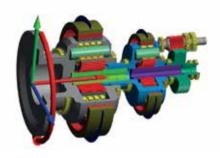
Further evaluations can be done by using the load distribution based on a quasi-static equilibrium. For ball bearings the risk of truncation for axial loads can be evaluated by comparing the extension of the contact ellipse with the height of the shoulder.





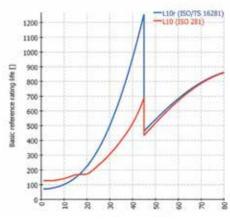
The spin-to-roll ratio and circumferential ball advance are kinematic properties which are used to evaluate high-speed ball bearings. For highspeed applications, the minimum contact stress should be sufficient to avoid slipping. In addition to rating life the maximum contact stress can be evaluated, which some industries prefer. Calculation of the bearing load distribution will also provide bearing stiffness matrices which can be used to calculate rotor dynamics. For bearings with contact angle there will be a coupling between axial, radial deflections and tilting angles in the stiffness matrix.

For the calculation of the bearing load distribution and the resulting reference rating life according to ISO/TS 16281, there are several programs available, usually in combination with a shaft calculation so the misalignment can be captured.



For some further damage modes, transient calculations using a multi-body approach are necessary instead of a quasi-static equilibrium. Usually only bearing manufacturers do such evaluations, which consider local interactions between rolling elements and races or cage.

The current standards for bearing life calculation still have some shortcomings. The diagram shows an example of rating life of an angular contact bearing with variation of contact angle under constant pure axial load. For a contact angle of about 40° the reference rating life according to ISO/TS 16281 is almost twice the rating life according to ISO 281. For a contact angle above 45° the bearing is considered as thrust bearing and the reference rating life according to ISO/ TS 16281 will be reduced by factor 2.6. If an additional misalignment from shaft deflections is considered for thrust bearings, the reference rating life according to ISO/TS 16281 will be smaller than the rating life according to ISO 281.



For more information: www.mesys.ag

Smart Retail Technology

Bringing digital innovation to the retail sector

Smart Retail Tech Expo is Europe's leading B2B exhibition focusing on 'New Retail'. The Expo is designed to provide a hub for over 3,000 physical and online retailers to network and learn more about the new era of retail.

The 2022 show took place at the ExCel in London on the 2nd & 3rd March and was specifically designed to bring together all the innovators revolutionising the UK retail industry. The show offered visitors the opportunity to hear from the best in the industry, retail prediction experts and industry defining leaders who all gave their take on what's going to be trending in 2022, how to create an innovative brand and a disruptive selling strategy. Keynote speakers were also at the show delivering talks on how to grow or start your own business as well as offering their expertise, industry knowledge and invaluable advice

This year the show introduced the XR Demo Zone which was the only place to try and test the latest VR and AR retail solutions. Suppliers at the cutting edge of

Machinery

innovation were also recognised with this year's Smart Retail Tech Innovation Awards. Visitors also had the chance to visit the in-store experience seminar theatre that showcased emerging technology designed to keep bricks and mortar retail alive. Other 2022 show highlights include customer behaviour seminars, digital transformation talks, keynote speakers from world renowned social media companies, product launches, and the emergence of dozens of new technologies designed to upgrade the user's online experience.

Don't miss out on next year's show which will be held at the ExCel, London on the 28th Feb- 1st March 2023.

www.smartretailexpo.co.uk



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Plus implementation is quick. In just 4-6 weeks you start saving money, gaining business intelligence and centralized data, and achieve total visibility into your returns lifecycle.

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Our proven process: How UNISIG leverages experience & expertise to solve customer challenges

or over 40 years, we've helped our customers achieve success in deep hole drilling, providing them with the machines, automation and support they need to be competitive and profitable.

We have found that the initial energy we and our customers spend at the beginning of a quoting process pays off throughout the entire project, from inception to installation. We take a systemised approach not only during this critical phase but also throughout the entire sales process. This ensures there are no surprises and that our customers know exactly what they can expect when starting discussions with UNISIG about their gundrilling and deep hole drilling needs.



This is our approach at UNISIG: 1. We listen to our customers, ask questions and understand what they need.

This may seem obvious, but often the temptation is there to just skip to a quote because we think we know what is needed after a brief discussion. Sometimes that is true, when the application is straightforward and familiar, or it is something we have a packaged solution for. We always try to make the quoting process quick and efficient, but there are times when the application deserves a more in-depth conversation. Our salespeople and engineers listen very carefully and often pick up on small details – a specific tolerance, material condition. process requirement or a future need for flexibility – that may change our recommendations.

When it makes sense, our experienced sales team or engineers will visit a customer to see what is needed firsthand. Whether a site visit or just a virtual meeting, this initial investment of time to clarify the need saves the customer money and provides them a truly valuable solution.

2. We first identify a standard solution from our product line that can be applied at the lowest cost and shortest delivery possible.

At UNISIG, our product development mindset is to systemise solutions from our experience in many different industries i ready and em whenever possible. We invest millions of dollars annually in our product line and related spare parts, giving us a strong starting point for new applications. Our standard product line encompasses much more than machines, including standard automation, workholding, accessories and tooling that we can offer as part of the solution.

Once we have identified a standard machine as a starting point, our engineers seek out smart, practical ways to meet the customer's application needs. The goal is to innovate within the machining operation planning, work holding or automation, as opposed to engineering a completely special solution without first exhausting opportunities to solve problems with standard products.

For our customers, this approach provides them a reliable,

standard machine that can be used for many years and that has the built-in flexibility for easy re-tooling to adapt to future needs. For us, initially working within the boundaries of our catalogue cultivates new ideas that can then be applied to improve our standard products as well as help us direct future research and development budgets.

3. If a standard solution isn't available, we consider a customised solution and we stand behind it.

UNISIG is very good at building customised machines, and we do so often. Once we and our customers agree that a special solution is needed, we move forward with a great deal of confidence and experience. We start by evaluating how we might approach the design using standard modules or proven concepts, thus eliminating long debug cycles and/or high costs. Then we use our mechanical and electrical engineering disciplines to virtually test the new machine before we build it.

One of the key reasons our customers are confident moving forward with a UNISIG custom machine is that they know we will stand behind it and that we have substantial capabilities to ensure it always exceeds their production expectations. We approach these special projects with the mindset that a custom



machine will be used for decades in production, which is why we provide the same documentation and long-term technical support for all our machines whether standard or custom. 4. If a commodity solution is readily available, we recommend

that rather than upsell a machine the customer doesn't need. We build machines that can gundrill or BTA drill deep holes that are impossible to drill on machining centres. Even if it may be possible to drill some deep holes on a CNC machining centre, our machines have the power, speed, dimensional accuracy, spindle density, coolant systems and process control that will improve

productivity, tool life and reliability.

Typically, though, when a customer comes to UNISIG with a specific part need, at that point they've most likely already struggled with a conventional machine and realised that a deep hole drilling machine is obviously the way to go.

However, our team knows how to identify whether or not an application would truly benefit from a UNISIG solution. When it wouldn't, we will suggest viable alternatives. It's not that we don't want to sell a machine. But the fact is that our experience has shown that at some point the alternative-solution direction becomes obvious, and we want to make that apparent early on in the process so as to avoid wasting a lot of our customer's time.

Our customers expect the best from us, and we believe that our proven process ensures we never disappoint. Our goal is to leverage our core values to serve our customers as best we can and build strong, productive relationships for years to come.

UNISIG is exhibiting at the AMB show in Stuttgart, Germany, 13 - 17.09.2022, Hall 9, Stand C11. Please contact us at: www.unisig.com

Increase your mold manufacturing versatility using the power of gundrilling with the leaders in deep hole drilling, UNISIG. Offering complete solutions for everything from simple to complex mold components, UNISIG machines help moldmakers improve efficiency, throughput and precision with outstanding part-processing versatility at an exceptional value.

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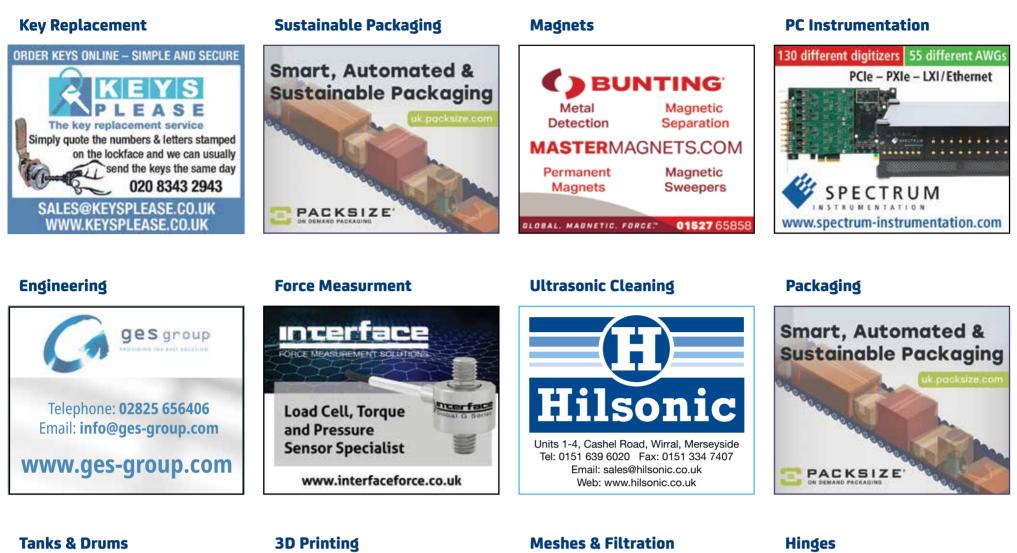
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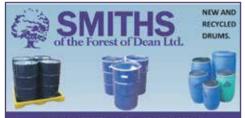
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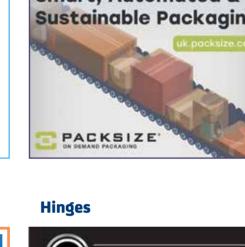
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Company Of The Year

The active force in Carbon and Service

n this issue of Industry Update, we are pleased to announce CPL Activated Carbons as our Carbon Recycling Company of the Year.

CPL Activated Carbons (formerly known as CPL Carbon Link) is a leading manufacturer and supplier of activated carbons and related services and has enjoyed strong growth in the environmental and industrial purification markets.





Operating out of its head office in Wigan, CPL Activated Carbons formed in May 1990, and has been part of the CPL Industries group since 1999. The company has its carbon recycling facility at CPL Industries' site in Immingham, Lincolnshire, as well as its engineering subsidiary CPL Icon located in Chesterfield. In mainland Europe, it has a subsidiary in Madrid, Spain, called CPL GalaQuim and a sister company in Paris called Puragen Activated Carbons.

CPL Activated Carbons is a supplier of purification solutions based on activated carbon technology. Applications are found in multiple industries, including water treatment, renewable energy, waste processing, chemicals and engineering, and the company can recycle spent carbon at the thermal reactivation facility in Immingham.

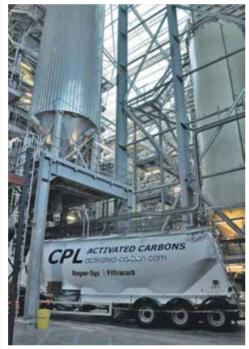


Looking back, Marketing Manager David Reay commented, "Revenue has risen strongly in recent years, despite the pandemic, and the past 12 months has seen this trend continue, with strong sales from our carbon and service business. Our spent carbon reactivation process, in which we have invested around £10m in recent years, continues to be the backbone of our growth, offering customers a cheaper and far more environmentally friendly alternative to increasingly expensive imported virgin activated carbons."

The company's fleet of mobile carbon vessels, engineered and built in-house in the UK by its subsidiary CPL Icon, also continue to go from strength-to-strength, with a high utilisation rate of these rental units that offer a convenient 'plug & play' solution to solve customers' purification challenges.

In a similar vein to all companies in the activated carbonbased solutions sector, the company has faced cost concerns linked to well-publicised increases in sea freight costs and, more recently, domestic energy and fuel prices. However, by way of smart procurement practices in addition to efficient operation, and clear communication with valued customers, the company is confident that it has dealt better with these unprecedented shocks than many other companies.

In collaboration with its sister company Puragen Activated Carbons, CPL Activated Carbons, continues to be a leading international manufacturer and supplier of activated carbon and related services for a wide range of industrial purification applications, including biogas, volatile organic compounds (VOCs), water treatment, and odour management. Puragen Activated Carbons is an international carbon company based in the USA but with a particular European focus on the French and Benelux markets. Economies of scale on the procurement of raw materials are being achieved, and the companies are extending the scope and reach of the mobile carbon vessel service business into continental Europe.



In a crowded marketplace, CPL Activated Carbons prides itself in being truly a 'one stop shop' to facilitate customers' purification solutions. In addition to a wide range of high quality FiltraCarb[®] activated carbons, it also has a growing fleet of Clean-Flo[®] mobile filters, for both liquid phase (AquaSorber[®]) and gas phase (VOCSorber[®]) purification applications.

The company can recycle most spent carbons at its UK thermal reactivation facility, using a process called Regen-Sys[®]. In addition to the manufacture of the mobile vessels, it also offers full engineering support, and can design, build and install all necessary pipework and valves required by customers to install mobile vessels for the first time.

CPL Activated Carbons also offers full laboratory and QA support and is ISO9001, ISO14001 and UK REACH registered. It is the only UK-based activated carbon supplier to offer all of these products and services,





placing it in a uniquely strong position in the market and catalysing all future growth.

The Clean-Flo[®] HF20V VOCSorber[®] was launched last year. This new flagship mobile filter unit stands at 8m tall and is the largest mobile gas-phase carbon filter on the market. It can deal with flows in excess of 40,000 m3 per hour and is ideal for large scale industrial air treatment projects, particularly odour control and the abatement of VOCs.





The UK government's Clean Air Strategy will place far greater focus on the reduction of industrial emissions, and the VOCSorber® range is the ideal solution to assist the large number of companies that may never have previously considered air purification technology but are now required to do so to comply with the latest legislation. This 20m' vessel contains about 10 MT of activated carbon, and while traditional high flow units have been horizontal, this is the first vertical unit designed by CPL Activated Carbons. These are designed for situations where there is a limited footprint space at a customer's site.

As the company looks forward, David continued, "we are planning to develop our strong growth in our sales into multiple industrial sectors, both in our traditional core markets of renewable energy, drinking water and energyfrom-waste, but also from new sectors and industries that find themselves requiring fluid purification solutions as a result of increasingly stringent environmental standards governing clean water and air."

CPL Activated Carbons recently displayed at the Resource & Waste Management (RWM) exhibition at the NEC in Birmingham in September. This was a great all-round show that attracted visitors from many of the sectors that the company supplies in to, including waste management, biogas and remediation. It had one of the flagship mobile filters on the stand, which proved to



be an eye-catching talking point for visitors and fellow exhibitors.

Regarding the Company of the Year award, David concluded, "We were very pleased to be selected for this award, particularly coming from a cross-sector industrial publication that complements the broad range of endusers that we supply with our products and services. The award recognises the hard work we have done in communicating our niche technical offering to our target markets, and the award will take pride of place on our displays."

For more information, search CPL Activated Carbons on LinkedIn, as the company posts articles on a regular basis, with information about case studies, exhibition news, environmental legislation, new equipment and other articles which are hopefully of interest to a broad range of readers.

Contact

T 01942 824240 info@activated-carbon.com www.activated-carbon.com

