Big future in the pipeline

A new name in the sector of in-situ pipelining aims to hit the ground running after attracting interest from Europe, Asia and the United States as well as the UK within weeks of launching.

UK-based ESCS Pipe Coating Systems brings together Roger Clark, Steve Jones, and Shaun McDonald, three experienced engineers in the sector, boasting more than 70 years of experience of in-situ spray application.

By launching the new company, the trio have created a one-stop shop for those requiring the application of a protective coating within the internals of static pipes.

Once approval is received from the Drinking Water Inspectorate, it is said that ESCS Pipe Coating Systems will be the first company to offer both the specialist paint and the state-of-the-art machinery to carry out the specialised jobs for worldwide water authorities, as well as companies owning gas or sewer lines.

The new company is part of Middlesbrough firm ESCS, a worldwide manufacturer and distributor of surface preparation and surface coating equipment that recently completed a wide-ranging order for the South Caucasian Pipeline Expansion Project.

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What has lime ever done for EfW?

The Industrial Emissions Directive (IED) came into effect in 2012 and details stringent regulations for large combustion plants.

Traditional processes involve a wet 'scrubber' system. These legacy wet systems are being superseded by modern dry systems as the UK growth in EfW continues. Therefore, as the dry system is the current preferred FGT method it calls for efficient acidic pollutants removal reagents to ensure compliance with IED regulations.

What is Sorbacal? Sorbacal® is a widely recognised range of calcium-based reagents used to neutralise acidic pollutants generated as a result of the incineration process in waste plants and industrial processes such as glass manufacture, cement production and non-ferrous metal processing.

How does Sorbacal® achieve this? SPC and SPS in accordance with propriety hydrotite™ technology, have the unique capability of higher reactivity towards gaseous pollutants such as HCl, SO₂ and HF versus a standard hydrated lime.

What are the benefits? The ability for reduced quantities of reagents to neutralise larger quantities of acidic pollutants than a standard hydrated lime offers greater flexibility to the plant designer. Plant designers now have the capability to implement a much simpler, lower cost, yet more efficient FGT process.

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Van Walt launch a brand new Data-Logger

Sometimes good enough is just not good enough. That was the problem Van Walt Ltd, the specialist supplier of water, soil and groundwater environmental research equipment, were experiencing. So taking matters into their own hands, they have designed and developed their own, brand new data-logger the vanwaltDataHub.

In looking for a solution Van Walt established that there was nothing available that could offer everything they wanted, so they decided to make our own.

The result, just 10 months later, is the vanwaltDataHub. A brand new, powerful and flexible data-logger, packed with features like multiple, simultaneous inputs and outputs (Pulse, SD12, Relays, Analog, Modbus and Digital I/Os linking up to 300 different environmental sensors to one data-logger. Data from these sensors can trigger alarms and operate switches; other sensors and gauges.

The vanwaltDataHub instructs, powers, interrogates and collects data from onsite sensors, organising it for distribution or sharing through on-board memory, industrial SD card, radio frequency, GPRS or satellite portals.

Van Walt Ltd worked with GB Electronics (UK) Ltd, a dedicated electronics design company for the prototype design, product assembly, programming and testing. When it Matters for the web interface.

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Getac strengthens leading rugged convertible notebook

Getac, manufacturer of mobility solutions for a range of industries, today announces updates to its leading Getac V110 rugged convertible notebook, designed to drive greater productivity and flexibility for utility field professionals as their industries become increasingly digitalised.

The V110 provides the reliability and power needed to perform a range of tasks efficiently for an entire shift. It includes the latest Intel® Kaby Lake Core™ i5 or i7™ processors for increased computing performance and better power usage, and has long lasting hot swappable batteries for use around the clock.

This helps utility companies take on a higher workload capacity, complete work faster and deliver better service to customers.

Today, data collection and exchange are growing exponentially with the rise of meter readings, GIS mapping, image processing and task tracking requirements. This can be simplified by the V110’s eight megapixel rear camera allows workers to rapidly capture digital evidence for asset and parts management or infrastructure maintenance. As workers need to be connected constantly, the V110’s proprietary antennae has been designed to provide exceptional 4G LTE WWAN coverage and performance out in the field, and combined with PowerShare USB 3.0 and multiple input ports, they get much faster download speeds.

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Engineered for a Cleaner Environment

Getac strengthens leading rugged convertible notebook

Engineered for a Cleaner Environment

Sustainability Today is sponsored by Impsex Diagnostics – see them on page III
**Water, Energy & Environment News**

**Your one-stop-shop solution for wireless LoRa energy and IoT services**

Founded in 2003 by current owner Peter Thompson, Invisible Systems Ltd specialise in the design, manufacture and supply of wireless LoRa energy and the condition and compliance monitoring and control of IoT systems. Invisible Systems Ltd concentrate on surveying client buildings and sites, proposing then designing solutions, through to supply and installation of monitoring hardware. They also provide their own Realtime Online Software, a web-enabling platform software suite, with dashboards, tailored reporting around various applications and alarm notifications in the event of exceptions.

Exicient customer service is at the forefront of Invisible System's priorities, with the company working in close conjunction with clients’ supply chains to ensure their products are delivered on time with a fast turnaround. With over 14 years experience in delivering reliable products to reputable businesses such as National Grid, Royal Mail, Greggs, Universities across the UK and more, Invisible Systems are your one-stop-shop solution for all of your manufactured, innovative wireless energy monitoring and control tools.

We asked Peter Thompson from Invisible Systems Ltd what differentiated the company against other technological manufacturers and suppliers, to which he responded, “Here at Invisible Systems Ltd, we are able to supply a wide range of wireless hardware for various applications, and not just for one vertical. Our web-based software with different modules are designed around different applications and our team have the experience and development capability to produce bespoke products and software to meet our client’s requirements.”

The past year has been immensely successful for Invisible Systems Ltd, as their leading and highly efficient IoT solutions have increased the company’s brand and product awareness. The company were also named as joint winners of BT's latest Infinity Lab competition aimed at discovering business transformation solutions in the Internet of Things. The competition attracted entries from almost 100 SMEs from the UK and overseas with several themes emerging around the potential application of future IoT based technologies. Invisible Systems' wide range of products and Realtime Online cloud based software programmes which provide end to end IoT solutions, caught the eye of the judges because it helps businesses save money and achieve regulatory compliance. BT is interested in these technologies as a potential IoT based solution for buildings which currently lack a building management system (BMS). This is typically used to control and monitor equipment such as ventilation, lighting and power as well as fire and security systems. Such critical factors need to be continuously monitored in a data centre environment, which is an application of Invisible Systems’ technology.

Additionally, in order to meet with current customer demands and be able to provide clients with the latest technological solutions available on the market, Invisible Systems Ltd continuously develop a highly innovative, engineered range of products with the same and additional functionality to the current range; where these will be both LoRa for private networks and LoRaWAN for public networks. Due to their continued success, going forward, Invisible Systems are looking to increase the business turnover by circa 50-75% this year and are currently on track following their initial thriving first three months of this financial year.

As one of the UK’s leading technological supply and manufacturing companies, Invisible Systems Ltd can be found at numerous trade shows throughout the year. This includes Industry 4.0 manufacturing. Edie Live, London IoT, Food Expo, and The Pharmacy Show, all of whom Invisible Systems Ltd are planning to visit again in 2018.

If you would like to get in contact and find out how their many specialist services can benefit you or your business, then don’t hesitate to pick up the phone today. More information can also be found by visiting the website below:

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**Tetra Pak® Separators with Encapt™ technology**

Tetra Pak has reduced the energy use of its separators by 40%, by incorporating a breakthrough pressure management technology, Encapt™, into the systems’ design.

The Encapt technology lowers the atmospheric pressure around the spinning bowl using a low-pressure pump, and the system is supervised by sensors that keep air friction minimal. Less friction means less energy required.

Combined with a unique Air-Tight design inside the bowl, where the whole system is hermetically sealed to ensure no air enters. With the inlet at the bottom and the outlet at the top it saves the centre for outlet flow and so requires less energy. These two technologies together make the machines the most efficient on the market.

Tetra Pak Product Manager, Ulrika Bahn said, “We want to help customers meet the challenge of achieving superior product quality with lower operational costs, and a lower environmental footprint. Most commonly used to separate milk or whey – the Tetra Pak Separators with Encapt technology, when paired with Air-Tight technology, offer incomparable energy savings.”

www.tetrapak.com

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**Thermal Imaging**

Thermal imaging can be used to identify loose electrical connection that could result in lost time at best and a fire at worst.

**Infrared Windows**

Infrared inspection windows retrofitted to distribution boards and cabinets allow safe and efficient inspection.

Please contact: Bryan Elwick to find out more: +44 (0)17961 035715 | bryan@elwicks.co.uk
Visit our website: www.eltec.co.uk
HEATING, VENTILATION & AIR CONDITIONING

by excellent people who care

places to live and work delivered
to boost UK energy efficiency

Public and private sectors unite

Sustainability Today is sponsored by Impslex Diagnostics – see them on page III

Emex Show Review Top 10

Creating and maintaining great places to live and work delivered by excellent people who care

The EMEX event provided a great platform to reinforce VINCI Facilities as a trusted and innovative partner for helping our customers save energy, carbon and reduce utility costs. Together with our supply chain partners, Offgrid, we sponsored Theatre 2, where we unveiled our latest fan series, the CyberHandler 2, designed, and can work in mixed refrigerants. Delta EC fans are able to reach 30% energy saving compared with AC fans in average.

Delta is widely recognised as the global leader in switching power supply and brushless DC fans. Based upon their in-depth knowledge and experience, Delta has committed to partner with leading experts, policy makers, suppliers, and customers worldwide. The Delta EC Fan Series is a combination of the distinct patented blade design, innovative structure design, and control that not only greatly increases cooling performance but also reduces system noise with temperature sensor control when the fan is in low load operation. Delta EC fan development groups have dedicated themselves to improving energy efficiency and control technology and use the optimised configuration design and control technology to improve product performance, solve noise and vibration problems, and provide intelligent control interface with stable speed control. The Delta EC Fan series, with electrical input power saving is designed to exceed the eco-design requirement of 2015 (ERP2015).

In 2013, the group formed by Impslex and GAS has established relationships and provided instruments to a range of blue-chip companies, research hospitals and research centres and universities.

Now recognised as a group of international leaders in multidisciplinary with extensive experience in business development and analytical sciences, the combined Impslex and GAS teams are a World leading business, application and technological development team with over 120 years combined experience in the field of Ion Mobility Spectrometry.

We asked Kevin Fernandes, Sales Manager at Impslex Diagnostics Ltd, what differentiates the company from other analytical chemical providers, to which he explained, “We are rapidly growing company with excellent chemical sensor technology for a wide range of applications. Perhaps our most recent success was the award of 3 million Euros from the Horizon 2020 (European Research Budget) to explore the possibility of diagnosing by breath samples differences in bacterial versus viral infection and the subsequent decision or not to prescribe antibiotics.”

He added, as an example one of our targeted applications is on the rapid separation detection and identification of siloxanes in biogas down to levels as low as 10 parts per billion (ppb). Siloxanes when burnt are converted to silica which is able to build up in the gas burning engines. What this means potentially is down time and loss of income from biogas but also considerable service costs for replacement parts and labour. The GC/IMS siloxanes instrument when developed with appropriate windows and GC filters are saturating and need to be changed. Costs saving again can be considerable as the filter material can be a significant cost to landfill, AD food waste, and sewage treatment works operators.

IMPSLEX Diagnostics Ltd focus is on solving analytical needs for providing turn-key, automated and simple solutions to specific problems by leveraging the expertise of their group. For instance, one of their most highly-sought after products is their GC-IMS ODOR™ standalone instrument, which has been developed for deodorisation sampling and delivers quantification and reporting of Gasodor® 5-F, 5-T (methyl acrylate and ethyl acrylate) and THF concentrations in natural gas. Eliminating the need for helium or hydrogen, the system requires only a nitrogen or synthetic air source for carrier and drift gas. The system can also be used with the new GAS internal gas loop, making the system totally portable, without the need for cylinder gas. The measurement intervals are user-defined and calibration can be carried out using a traceable gas standard via a designated calibration port either manually or routinely to ensure maximum accuracy. The large TFT touchscreen permits system control displays, current measurements, and allows review of previous results. Results and measurement files are stored internally on the integrated compact flash card. These results can be downloaded via USB or transferred via the 4-20 mA current loop, a modem or network connection to a control station.

If you would like to get in touch with Impslex Diagnostics Ltd to find out about their specialist range of equipment, then don’t hesitate to call today. More information can also be found on their website, listed below.

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UK AD & Biogas News

Offgrid, we sponsored Theatre 2, where we unveiled the first air handling system back to the server area. STULZ introduced the CyberHandler 2 series, the specialist for reliable air conditioning system with a high level of redundancy can be designed, and can work in mixed mode for high energy efficiency.

As power densities increase, a new design factor is coming to the forefront: air conditioning solutions. Air handling units (AHU) incorporate all the air conditioning equipment of a data centre in one outdoor container, thereby creating more space for productive IT systems inside the actual server area. STULZ introduced its first air handling system back in 2015. With the CyberHandler 2, the specialist for reliable air conditioning solutions is now offering a comprehensively redesigned successor. The CyberHandler 2 series includes eleven output ratings from 30 to 220 kW. It combines free cooling, adiabatic cooling and mechanical in one sealed outdoor container. The choice of chilling methods includes chilled water coils, scroll compressors or a redundant DK system with external condenser. If high availability is required, a fully weather-independent air conditioning system with a high level of redundancy can be designed, and can work in mixed mode for high energy efficiency. www.stulz.co.uk/en/ cyberhandler-2

The EC Fan Series is a combination of the distinct patented blade design, innovative structure design, and control that not only greatly increases cooling performance but also reduces system noise with temperature sensor control when the fan is in low load operation. Delta EC fan development groups have dedicated themselves to improving energy efficiency and control technology and use the optimised configuration design and control technology to improve product performance, solve noise and vibration problems, and provide intelligent control interface with stable speed control. The Delta EC Fan series, with electrical input power saving is designed to exceed the eco-design requirement of 2015 (ERP2015).

Creating and maintaining great places to live and work delivered by excellent people who care

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Delta’s unparalleled competence in developing Integrated Solutions

Delta, a global leader in power and thermal management solutions, was highlighted at the Hannover Messe 2018, its unique ecosystem of smart and energy-efficient solutions to realise smart manufacturing as well as safe and comfortable green cities. At its own press conference, Delta was underscoring the superior features of its high flexibility multi-tasking Smart Production Line, a 4-meter IoT-based manufacturing platform integrating three robot workstations, software systems and a 12-station conveyor to offer visitors a live demo of smart manufacturing. In addition, Delta displayed an abundant range of solutions for sustainable cities, including the IoT-based Building Management Platform, which integrates our building automation technologies, IP surveillance equipment and smart LED lighting to deliver substantial energy savings and lower carbon emissions in commercial and industrial facilities.

Mr. Jackie Chang, President & General Manager of Delta Electronics in the Europe, Middle East & Africa (EMEA) region (pictured) said, “We were deeply proud to demonstrate at Hannover Messe 2018 that the utility, functionality and versatility of our integrated energy-saving solutions were advancing rapidly. Whether our EMEA customers are seeking to implement IoT connectivity, energy monitoring and smart automation in their manufacturing platforms, or increase the energy efficiency, safety, comfort and market value of their buildings, or integrate EV charging infrastructure with renewable energy in their city, Delta is certainly the most suitable partner given our superior technology and accumulated experience in integrating total solutions.”

www.delta-emea.com

Bauder Ltd launches roofing solution for construction within flood sensitive areas

Bauder Ltd launches roofing solution for developments in built up and flood sensitive areas, including the IoT-based Building Management Platform, which integrates our building automation technologies, IP surveillance equipment and smart LED lighting to deliver substantial energy savings and lower carbon emissions in commercial and industrial facilities.

Delta showed its Smart Energy-Saving Solutions for Sustainable Cities at Hannover Messe 2018

Delta showcased its solutions for smart cities presented for Hannover Messe 2018 visitors at our Hall 11, stand A57 exhibition site held from April 23 to 27.

Contact www.delta-emea.com

Steel Coating uses rapeseed oil, not fossil-based oils

House KD, a holiday home in Sweden featuring a Green-Coat colour-coated steel roof, made the shortlist of the 2017 World Architecture Festival Awards. Green-Coat colour-coated steel products from SSAB have a patented, Bio-based Technology coating, using rapeseed oil instead of fossil-based oils in its manufacture. This reduces the environment footprint and provides extreme durability, resistance to corrosion and long colour retention.

Fuel Services

Opti-Diesel is ready to half UK fuel emissions

Opti-Diesel is a world-class provider of industrial automation solutions unveiled at Hannover Messe 2018. Its integrated Smart Factory and Energy Management solutions to enable higher productivity and energy conservation through smart manufacturing. Delta’s High-Flexibility Multi-Tasking Smart Production Line features seamless integration of our digital manufacturing monitoring platforms, IoT technologies, three robot workstations and a conveyor to let visitors perform on-site process monitoring and real-time monitoring of the customised oil production process. Furthermore, the new 3D Vision Inspection System enhances logistics efficiency through precise package shape and dimension identification. The aforementioned solutions shall demonstrate Delta’s unparalleled calibre in the field of smart manufacturing at equipment, production line and factory layers.

Mr. Andy Liu, General Manager of Delta’s Industrial Automation Business Group, indicated, “Smart manufacturing is not only a trend but an imperative way for companies to sharpen their competitive edge. Delta remains focused on strengthening the capabilities of its industrial automation solutions and their underlying software and hardware platforms, to help customers attain superior performance and lower carbon emissions through smart manufacturing in their operations. Our showcase at Hannover Messe 2018 was specifically designed to prove how our next-generation solutions and integration prowess converge to turn smart manufacturing into a reality.”

www.delta-emea.com

Industrial Sustainability

Steel Coating uses rapeseed oil, not fossil-based oils

Hose KD, a holiday home in Sweden featuring a Green-Coat colour-coated steel roof, made the shortlist of the 2017 World Architecture Festival Awards. Green-Coat colour-coated steel products from SSAB have a patented, Bio-based Technology coating, using rapeseed oil instead of fossil-based oils in its manufacture. This reduces the environment footprint and provides extreme durability, resistance to corrosion and long colour retention.

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Opti-Diesel is ready to half UK fuel emissions

Opti-Diesel is a patented fuel additive specifically designed to improve fuel consumption – generating significant cost savings and reducing greenhouse gases and other harmful emissions. It’s been found that introducing Opti-Diesel to the national fuel supply chain would be the equivalent of removing 50% of vehicles from the UK roads.

Opti-Diesel is a world-first catalyst in the fuel industry. The way this works is that the additive lowers the amount of energy needed to cause the fuel to combust. Therefore, reducing greenhouse and other harmful emissions. Just by 26% of Opti-Diesel is needed to make 1 litre of fuel more efficient.

Opti-Diesel uses a unique combination of reactions, including fuel use reductions and catalytic reactions in order to significantly slash the amount of harmful and toxic emissions from vehicles.

The additive has no negative impact on existing emissions controls systems and engine wear. Opti-Diesel can be used with practically any vehicle as the additive requires no specialised equipment to install or utilise, and it requires no modifications to the existing vehicle’s engine.

Case Study 2: The first test on a 2.6 tonne Scania with a Euro V engine showed a 35% reduction in fuel consumption and a 15.7% reduction in harmful diesel particulates matter.

www.opti-diesel.com

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