



SUSTAINABILITY TODAY

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www.businessandindustrytoday.co.uk

energy | water | waste | recycling | sustainability on LinkedIn and Twitter

Water Management

Atomic Fluorescence Spectrometry

Online wastewater analysis for the determination of Mercury (Hg), Arsenic (As) & Selenium (Se), at trace concentrations, using Atomic Fluorescence Spectrometry.

Hg, As & Se are considered environmental priority pollutants and the determination of these metals in wastewater from industrial sources is a challenging application. In recent years wastewater treatment plants have been installing technologies to capture and remove the metals.

The efficiency of these treatment processes needs to be monitored using accurate analytical systems.

Some examples of industrial processes that require wastewater monitoring for these elements include:

- ▼ Thermal Coal Power Generation (FGD wastewater)
- ▼ Oil and gas refineries (Produced/Desaliner Water)
- ▼ Smelting plants
- ▼ Semiconductor fabrication
- ▼ Incineration wastewater
- ▼ Chor-alkali plants

The targeted sample matrices are often highly challenging so any online approach must be capable of handling a variety of complex waste waters.

Benefits of online analysis

It's widely accepted that online analysers



offer some major operational and cost benefits compared to traditional laboratory approaches including:

- ▼ Improved efficiency, accuracy, and consistency of the data
- ▼ No gaps in the data set (24/7 capability)
- ▼ Realtime results (with alarm feedback)
- ▼ Lower operating costs and labour savings through automation

Improved worker safety

Online analysers from PS Analytical PS Analytical offers 2 fully automated online wastewater analysers for these applications:

- ▼ PSA 10.226 Online Hg
- ▼ PSA 10.256 Online Excalibur (for As/Se)

Both systems employ AFS as a means of detection, which offers a number of benefits in terms of analytical performance:

- ▼ Ultra-trace limits of detection
- ▼ Wide analytical linear working ranges
- ▼ Lack of chemical interferences
- ▼ Inexpensive running costs
- ▼ Ease of use

These analysers represent the third iteration of our online offerings for aqueous liquid streams. Both systems have some similarities including:

- ▼ Touch screen PC
- ▼ Multiple sample streams including grab samples
- ▼ Self-cleaning sample filtration.
- ▼ Very Low reagent and utility consumption
- ▼ Typically, 5-7ml of reagent is required per sample
- ▼ Online digestion and sample preparation
- ▼ Customisable alarm output options

For more details, contact us at: psa@psanalytical.com

UVT monitoring optimises dosing in drinking water plants

To start 2023 another batch of UV254 analysers are being shipped to multiple sites in County Kerry, this is a follow on from the success of Photonic Measurements in 2022 having many UVT analysers installed at Irish Water sites.



Photonic Measurements continuous measurement systems are being used at raw water inlet to monitor UVT, a key indicator of the organic content of water. Photonic Measurements are giving the plant controllers access to real-time data for more efficient, economic and environmentally friendly control of their process. The early diagnosis of the change in water quality is key to predictive control, allowing accurate measurement prior to dosing and flocculation means reducing wastage. Photonic Measurement's goal for 2023 is to continue to work across Ireland and the UK, and to

expand our global network while continuing to provide a high level of customer service for existing clients.

The water industry is moving toward net-zero and sustainability through digitalisation and automation, our UV sensors and IRIS controller can be linked with SCADA, telemetry or IoT to give a comprehensive overview of water quality.

Find out more at: www.photonicmeasurements.com or call on +44 (0)28 4457 2316.

Working to Raise Industry Standards

- **N.S.A.** Represents the interests of companies associated with the survey, operation, maintenance and renovation of sewers, drains and pipelines.
- **N.S.A.** Acts as a forum for its members to ensure that technological developments go hand in hand with improved operational efficiency.

Standards

Pro-active in setting and maintaining training standards within the industry. Representation on standards and parliamentary committees and regular consultees on a broad range of Legislative and Regulatory matters.

Members

Our members range from sole proprietors to divisions of public companies providing services such as:

- CCTV Inspections
- Sewer Flow Surveys
- Systems survey and Mapping
- Drain and Sewer Cleaning
- Equipment Manufacture
- Training

For more information visit our website: www.sewerage.org or call Val Gibbens on 020 8330 0123

Commitment to Carbon Neutrality – Level Blue

By Xavier Mear of Lhoist UK (pictured)

As a lime manufacturer, Lhoist recognises that the nature of its operations has the potential to influence the ecology and communities around its facilities. Owning and operating a diverse range of geological deposits and manufacturing facilities across the world, means that the responsible use of these natural resources, and the protection of the surrounding environment, has been a natural part of its operations for a long time.



It is recognised that the ultimate goal for Lhoist needs to include carbon capture and storage/ utilization schemes since even a zero-carbon fuel source would still associate lime manufacture with a CO₂ release.

Of course, a way of tackling carbon, is to reduce and avoid CO₂ emissions where possible, whilst any remaining parts can be offset to generate carbon neutral products. Here we invest in energy efficiency and renewable energy projects.

our reagents, and we will provide you with internationally recognised certification that will demonstrate your support and efforts on carbon neutrality.

3 Scopes of Emissions

The Greenhouse Gas protocol divides the CO₂ emissions into three scopes:

- ▼ **Scope 1 Emissions** – Direct emissions that come from sourced owner or controlled by a company, eg. running vehicles.
- ▼ **Scope 2 Emissions** – Indirect emissions from purchased electricity consumed by a company.
- ▼ **Scope 3 Emissions** – Emissions that a company is indirectly responsible for across its value chain, eg. from buying products from its suppliers, and from its own products when their customers use them.

How does LEVEL|BLUE® work?

In line with the Greenhouse Gas Protocol, we have brought together the necessary hard data over the years to measure all emissions from our UK facilities. It enables us to offset the exact amount of still released CO₂ emissions from our production by investing in certified carbon reduction projects.

We understand the responsibility we bear towards sustainability and acknowledge the interests of our customers in understanding how we plan to contribute, identify opportunities, and structure ourselves to be part of the transition to a low-carbon and sustainable-growth economy.

There are also aims to establish standards with a common, robust framework on carbon accounting rules, and incentivise industry towards cleaner technologies and reducing CO₂ emissions.

Carbon capture

Sustainability means taking responsibility with long-term vision but technical hurdles remain. Abating lime carbon emissions is very challenging for a process that generates inherent emissions from the chemical transformation of limestone to quicklime.

What does LEVEL|BLUE® mean for you, our customers?

LEVEL|BLUE® is our answer to deliver for our customers carbon-neutral reagents, and as of January 2023, all UK products will be carbon-neutral by reducing CO₂ emissions where it is possible and offsetting the remainder with carbon reduction projects in accordance with the Greenhouse Gas protocol.

These reduction projects are certified by Gold Standard and Verified Carbon Standard and support the UN Sustainability Development Goals.

Moreover, you, our customer, will be in a position to report your Scope 3 Emissions neutralisation when using



The specifications, quality and consistency of Lhoist UK products remain unaltered and their ordering process also remains unchanged, as all products from Lhoist UK will conform to LEVEL|BLUE®.

For further information, please contact: gwyn.watkins@lhoist.com or scan this QR code.

Celebrating 76 years' service to industry



In this issue of Sustainability Today we are pleased to announce PEMO PUMPS as our Pump Manufacturing Company of the Month.

PEMO PUMPS is a brand of Perissinotto S.p.A. and was founded in 1947 by Antonio Perissinotto. Initially the company focused on the aggregates sector and specifically on washing silica sands, where the need to move large quantities of water and sand led to the development of a design for pumps that would resist abrasion.

We spoke with Massimo Ghio, Sales Area Manager at Perissinotto S.p.A. PEMO PUMPS, who unravelled the company's history to us in more detail.

"In the post-war period, driven by the construction boom, our pumps began to be used in marble and granite cutting processes, where sand is part of the abrasive mix. In the early 1960s we made considerable changes to the modernisation and development of our products which then in the 1970s enabled us to enter new markets when new challenges opened up to us that included moving into the steel industry. We then continued our expansion into the 80s with the design and production of pumps for the chemical and wastewater treatment sectors."

This extensive history favoured the development of new models of centrifugal pumps for the company. Combined with double-speed motors that were used to feed filter presses, where to this day, PEMO PUMPS continues to be a sector leader in with its vast range of various models, designed according to customers' needs.

The 2000s welcomed the third generation which further promoted the growth of the company, and thanks to technical innovations and the use of new materials – that are increasingly resistant to abrasion and corrosive agents – this confirmed the uniqueness of PEMO PUMPS products. And, of course, a large amount of gratitude goes to the work of the company's technicians who are always ready to meet and understand the needs of the customer.

Fast forward to today, and PEMO PUMPS is



In attempt to continue growing the brand, future participation in the European trade fairs Bio360 EXPO (Nantes), Pollutech (Lyon), The World Biogas Expo and RWM & Letsrecycle Live in Birmingham have all played a massive part in introducing the PEMO brand not only to operators in the biogas and biomethane production chain, but also to all sectors where robust and indestructible pumps are required.

PEMO's technology involves centrifugal pumps with semi-open impellers and anti-clogging volutes that enable the transfer of highly viscous substrate containing fibres, filaments and large solid parts. "The use of our pumps in this area has numerous advantages over the



manufacturing at the top of its game, going from strength to strength each new year.

"In 2023, in addition to celebrating our 76th birthday and the 42 thousandth PEMO pump placed on the world market in more than 100 countries, we have set ourselves a very ambitious goal, namely to make ourselves known and appreciated in the French and English markets as well. However, we are not completely silent in these two countries as we already have several pumps installed, mainly in the aggregates, tunnelling and stone processing sectors, where our pumps are used for transferring slurry and for feeding filter presses," added Massimo.

more commonly used single-screw pumps, and in particular, thanks to the use of our 'HARDALLOY PEMO' wear-resistant superalloy maintenance intervals become very long – even 5-6 years," said Massimo.

Alongside its brand development and marketing, PEMO has largely invested into the development of its headquarters in Vimodrone, which covers an area of 12,000m² and employs around 70 employees. This means that the entire production cycle of the pumps takes place at its own premises and under its own control and management. "We would like to point out that all the material for our pumps is cast at foundries located in northern Italy, with which we boast a 10 year partnership and an almost perfect relationship and affinity. This allows us to have a very high level of quality, which places us at the top of the market," added Massimo.

In addition to those already mentioned, the main sectors where PEMO PUMPS are currently preferred include:

- ▼ **Anaerobic digestion processes:** used in the biogas production sector, where its pumps are used to load and recirculate OFMSW to anaerobic digesters
- ▼ **Ceramic industry:** where the liquid slip has highly abrasive characteristics as it combines a high concentration of solid product and a temperature that can reach 80°C
- ▼ **Chemical industry:** where its pumps can be customised with highly corrosion-resistant materials, they are often preferred for their robustness in applications where the mixture contains solid particles
- ▼ **Paper industry:** where paper pulp has to be transferred to the various production stages
- ▼ **Painting plants:** where paint can be pumped at medium to high pressures
- ▼ **Food industry:** where the washing of vegetables and products often requires the circulation of water with soil or other impurities to the final treatment
- ▼ **Fertiliser plants:** with a focus on the Green Economy.

In closing, Massimo added, "We are proud that our range of



pumps include different types of flow rates up to 2,000m³/h and pressures of up to 24 bar. We have a wide range of models with rubberised bodies and impellers, or in our PEMO HARDALLOY superalloy with high abrasion resistance and hardness up to 800 Brinell, which guarantees excellent abrasion resistance even with fluids with very high concentrations of solids and pressures up to 24 bar. Finally, please note that PEMO PUMPS can provide the maximum abrasive particle size that the pump can transfer and the concentration of solids in the fluid for each of its pumps."

www.pemopumps.com/en/



Net Zero & Energy Management

EMEX, held at London's ExCeL from 23-24 November 2022, is THE Net Zero and Energy Management Exhibition for all professionals wanting to create a low carbon, energy efficient and sustainable future in their organisation. It is the largest community of Energy, Sustainability, Facilities, Operations and Climate Change professionals joining forces to provide visitors with practical knowledge, innovative solutions and latest learnings from successful implementations of energy-saving projects and Net Zero strategies.

From the bottom up, it empowered visitors to succeed in their journey to Net Zero. There was a packed programme spread across four free-to-attend seminar theatres – Carbon & Energy Management



Strategy – Sustainability & Net Zero – Built Environment & Transport – Energy Future & Flexible Networks. Here, visitors could review best practices, sharpen their plans and source new solutions.

Visitors were able to take the time to talk to exhibitors and sponsors and learn about some great products, services and innovations. Reducing the amount of energy your business

uses could have just as profound an effect on the bottom line as the sales team exceeding targets.

EMEX returns this year to London's ExCeL from 22-23 November 2023. This is our pick of the best exhibitors from last year's event. Further details can be found on this page and the next two.

www.emexlondon.com

Great compressed air giveaway launched for March

ENERGAIR, the sustainable compressed air management arm of CMC, has dedicated the entire month of March to giving away not products or services, but knowledge in a bid to help manufacturers cut energy costs and carbon emissions as the UK heads towards net zero.

From the 1 March, ENERGAIR is offering manufacturers in the UK and US free 30 minute online video consultations with one of their compressed air specialists from parent company CMC, the global experts in compressed air control, performance and monitoring solutions.

During the consultation, participants will learn how to create simple strategies to cut their business's compressed air wastage and increase profit, reduce compressed air asset-related carbon emissions by 30%, and deliver greater accountability of their compressed air assets.

On ENERGAIR's decision to give away its time and knowledge, its Business Manager, Pete Tomlins, comments, "It's no secret that the cost of everything is going up, particularly with regards to commercial energy, and there has never been so much pressure on manufacturers to cut costs and carbon emissions.



Time and time again, we're seeing manufacturers miss easy wins when it comes to decreasing their environmental impact and increasing their bottom line, so we're trying to put that right by demonstrating to compressed air users what is now possible."

Those interested in gleaning as much knowledge from experienced technicians at the 40 year old firm have until 31 March to do so. Bookings can be made directly via: <http://bookameeting-uk.energaair.com>

For more information on ENERGAIR, visit: www.energaair.com



ClearVUE.Business Your Net Zero Partner

ClearVUE.Business is a leading consultancy service that offers energy and carbon management solutions to global businesses. As energy markets worldwide become increasingly volatile, companies face mounting financial pressure, making it essential to take ownership of their energy management through thoughtful reduction strategies. ClearVUE.Business' energy management platform, ClearVUE.Zero, offers data insights into an organisation's energy and carbon consumption, enabling businesses to identify areas of opportunity and savings across their entire portfolio.

ClearVUE.Zero's Energy Management Module (EMM) empowers organisations to scrutinise their energy consumption and cost data down to individual circuits and assets such as lighting, HVACs, water pumps, compressors, and more. This level of insight enables businesses to safeguard themselves against market volatility while capturing long-term sustainability

gains from increased efficiency. Additionally, ClearVUE.Zero's Carbon Management Module (CMM) enables businesses to accurately calculate and report their carbon footprint transparently, accounting for their scope 1, 2, and 3 carbon emissions in line with globally recognised standards.

We invite all EMEX attendees to visit our booth and explore how we can support their sustainability journey. From procurement to risk mitigation, increasing efficiency, achieving sustainability, and providing the right advice, GPG and its associated group of companies help global organisations and businesses succeed in their energy, climate, and sustainability goals. Join us at EMEX and let us show you how ClearVUE.Business can partner with you to achieve a sustainable energy future.

T +44 (0)3 300 300 200
www.clearvue.business

Save energy, carbon, time & money

www.whatsthepayback.com is a FREE-to-use website where users can quickly obtain costed payback on investment calculations for an ever-expanding range of energy and carbon reduction technologies.

Our approach simplifies the building energy audit process, allowing any user, from homeowner to energy professional, to use the site and obtain meaningful results.

The software presents users with energy savings opportunities, and it enables users to action these by linking recommendations to a network of approved suppliers.

Energy/carbon saving calculations are built on data supplied direct from suppliers and installers, providing detailed energy-saving results bespoke to each user.

In a few clicks, users can create fully editable word documents which present findings in a clear succinct format detailing payback on investment opportunities.

The sites use Life Cycle Cost Analysis to calculate



payback estimates which are of particular interest to businesses and energy professionals looking for detailed investment advice.

Technologies currently include solar PV, heat pumps, lighting, boilers, CHP, roof insulation and more. We are continually adding new technologies and suppliers to the site as well as expanding Net Zero and energy efficiency automatic report generating capabilities.

www.WhatsthePayback.com

Clear.VUE ZERO

EMEX TOP 10 EXHIBITORS 2022

MOST ADVANCED
energy management and carbon accounting platform

Call us: +44 (0)3 300 300 200 | Visit: clearvue.business

HPC Compressed Air Systems

GO YELLOW → BE GREEN → SAVE MONEY

More Air, Less Energy

HPC KAESER's range of compressors are so energy-efficient that by going yellow, you'll turn your operation green

www.hpccompressors.co.uk

Specific Power: How to save energy & costs

HPC compressors are designed to ensure they save customers on energy costs. How? By having the best 'Specific Power'.

Specific Power (SP) is the ratio of total energy used by the compressor and its compressed air output (at a stated pressure). The lower the SP, the greater the efficiency, and savings.

Taking HPC's SM13 Rotary Screw Compressor's @ 6 Bar, we can see the SP is 6.4 KW/m³/min: 8.56kW (Total Energy Used) ÷ 1.34m³/min (Compressed Air Output) = 6.4 KW/m³/min (SP).

Equivalent non-HPC compressors typically have a higher SP, exceeding 7.0 KW/m³/min.

How does this save you money?

This is how the cost saving is calculated: SP x Total Volume Compressed Air x Cost Per kWh = £.

And this means that investing in a compressor from HPC saves you money in the long-term. In fact, HPC saves customers up to £25,000 in electricity costs per year.



If you are looking for a compressed air solution, then speak to an HPC Authorised Distributor or contact HPC directly. We will show you how choosing HPC can save you money and turn your operation greener.

www.hpccompressors.co.uk

Turn your steam into savings

At the EMEX Expo 2022, the feedback from attendees to the Heliex Power team was clear; unprecedented cost increases are making it harder than ever to balance the day to day running of industrial plants with planning for a low carbon future.

While times have been tough for industry, Heliex Power has found its Twin Screw Turbine (TST) has, in some cases, been the difference between having to pause or shut down production. Why? Heliex Power's TST optimises plants by harnessing the power of saturated process steam and generates low-cost electricity via their patented steam screw expander technology. The outcome? Electricity which can be used onsite or sold to the grid.

Heliex Power has over 80 units in operation in a wide range of industries including Medical Waste Incineration, Agriculture, Combined Heat and Power (CHP), Chemical & Pharmaceutical, Industrial Waste Incineration, Food & Beverage, Timber, and other specialist applications. To date, Heliex Power TSTs have helped clients save over 4.8 million kWh of power and 3.9 MTe of carbon!



For those looking to harness the potential of their waste heat and steam it is not too late to act. A Heliex Power TST is easy to install or retrofit with a small footprint and requires little to no operational downtime. The TST is also covered by a full warranty and servicing as standard to ensure plants continue to maximise their potential.

To find out how you can turn your steam into savings, contact our experts via the link below.

www.heliexpower.com

New potential for saving energy and costs

Regal Rexnord/Nicotra Gebhardt presents COPRA, a new plug fan system with special characteristics specifically tailored to the requirements of data centres and applications for ventilation and air-conditioning. COPRA features three strengths that previously seemed almost impossible to combine: compactness, high system efficiency and high power density.

The aerodynamically redesigned aluminium impeller has an advanced 3D geometry. The drive is a particularly short internal-rotor motor, whose hub does not obstruct the airflow in the impeller. As a result, high efficiency is achieved despite the conveniently short axial length. In combination, the new plug fan deliver static system efficiencies of around 70% and more, with maximum power density. And thanks to the new system's low installation losses, this advantage applies especially to even in tight

NICOTRA | Gebhardt®

installation spaces.

Another important reason to choose COPRA is its good part-load performance, since fans do not usually run at full load. The system shows its strengths here too, delivering maximum efficiency. Especially when used in multiple wall configurations (fan grids), its compactness in axial length offers clear advantages. So do its particularly small diameters for high airflows.

Thanks to these properties, COPRA can save considerable costs not only in new installations but also in energy modernisation.

T +44 (0)1709 780760
www.nicotra-gebhardt.com

Invisible Systems

Invisible Systems is one of the UK's leading Internet of things providers. Focused on enabling clients to achieve their sustainability goals, Invisible Systems offer the I-System, an intelligent solution made up of smart sensors and their online data platform, Real-Time Online.

Processing over a million records each day, the Manchester-based business supports industry giants such as Greggs, the NHS, Balfour Beatty, and Disney. With the IoT system priced from £7.50 per month for shipping, install and maintenance, Invisible Systems also makes smart monitoring accessible for SMEs.

The system can monitor pretty much anything, from energy usage to temperature, from asset performance to air quality and even legionella



compliance.

Within Invisible Systems data platform, Real-Time Online, you're able to automate reports, understand your environments and even set threshold alerts, enabling proactive action to be taken should anything look out of the ordinary.

All in all, the I-System by Invisible Systems is a solution that arms you with the data and insight your business needs to operate efficiently, achieve net zero and create healthy environments as standard.

Contact
www.invisible-systems.com

At IP Enclosures UK, quality is paramount

All electrical enclosures are manufactured in Europe using high-quality materials and manufacturing processes. Each enclosure is engineered to suit relevant standards, ingress prevention, design forces and the environment.

One of the key strengths at IP Enclosures UK is the ability to meet and satisfy a wide variety of project requirements. A large catalogue of off-the-shelf enclosures and accessories is available for ready-to-go solutions. In addition, their team

of experts work closely with technical teams for larger-scale projects to develop end-to-end outcomes including modifications to existing designs or creating entirely new designs from scratch.



IP Enclosures®

Depending on your application a wide variety of materials are available, including powder-coated galvanised steel, 304/316L stainless steel, GRP, and marine-grade aluminium. All Electrical Enclosures conform to the strict industry standards of IEC62208, IEC/EN/AS60529 and UKCA for low-voltage switchgear and control gear assemblies.

Whether you are looking for control panels, battery storage or data and network enclosures, IP Enclosures UK has the expertise and experience to meet your needs. Their commitment to quality, innovation, and customer service set them apart as a leader in the global electrical enclosure industry.

Aim for high quality and ask for genuine IP Enclosures.

Contact
T 01527 433383
www.ipenclosures.co.uk

datore smart data

Are you facing a challenge to increase energy efficiency for your organisation?

Datore can help you shed light on energy management with analytics and AI. "With over 20 years of experience in the built environment sector, we help businesses better understand their energy and facilities needs and find areas for improvement," says Graham Perry, Commercial Director.

ECOSmartAI powered by Datore is a software as a service that monitors and analyses data about energy consumption, generation, reconciliation, Net Zero, and SECR.

The software can be customised to the specific business needs and integrated into any existing software solution already used. "The industry is awash with energy platforms that capture information and produce dashboards. We take this to the next level by adding the ability to quickly integrate code or Machine Learning models that would actively monitor your estate and even automate decision making through direct instruction back to the onsite BMS," adds Perry. "Equally, it was important to ensure that clients with a simple requirement for monitoring were catered for at a cost that made the ROI quick and easy."

Contact us at: info@datore.co to discuss how ECOSmartAI can help your organisation reduce energy bills and carbon footprint.

ECOSmartAI powered by datore

Reduce energy bills and carbon footprint for your organisation.

Shed light on your energy management with analytics and AI.

"Datore saved one of our clients **more than £500,000** by reconciling their energy agreements against the supplier invoices"

Tom Lawrence
Director at Flow&Ebb Energy Advisors

www.datore.co | info@datore.co | 0800 112 3282

Data & Electrical Enclosure Specialists

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www.ipenclosures.co.uk | 01527 433383

Your partner on the road ahead



Recently, Dynapac has been in the news for their innovative electric rollers and pavers that are helping their customers and the industry reduce carbon emissions and meet new regulations. However, Dynapac is also paying close attention to improving efficiency of fossil fuel powered equipment with technologies like the PROTAC spray paver and SEISMIC, as Seby Joseph, Global Marketing Manager, explains, "SEISMIC is a



paver and three models of electric vibratory plates.

The latest addition to the portfolio is the electric City Paver SD1800W e. The electric drive comes with a highly efficient three-phase permanent magnet synchronous motor (PMSM) that provides 55kW of power to the hydraulic system. In terms of paving autonomy, and depending on the type of job, application, and intensity of the work cycle, the SD1800W e offers up to four hours of rugged performance with one single charge. Charging is done with a provided CE-compliant Type 2 plug for 400V, 6-32A, 1.4-22.0kW AC. It takes approximately three hours to charge from 5% to 80% at 400V 22kW (AC) or 40 minutes from 80kW (DC.) The SD1800W e is the perfect choice on busy construction sites, with reduced heat, vibration and zero air and oil filters: this is a smooth-running

In this issue of Sustainability Today, we are proud to announce Dynapac as our Specialist Road Construction Machinery Company of the Month.

Established in 1934 as AB Vibro-Betong: a vibration compactor innovator, the company renamed as Dynapac in 1973. Dynapac, now part of the FAYAT Group, is a leading global producer of ground-breaking soil and asphalt rollers, light equipment and pavers for construction companies, dealers and end-customers in the public sector or commercial sector. Based in Karlskrona, Sweden, with production facilities in Europe, South America and Asia: Dynapac has a strong global presence through its regional sales and service offices.

unique and intelligent technology, that automatically enables the soil roller to determine the optimum frequency of any compacted material. The process is achieved using an advanced data flow from the SEISMIC Compaction Meter to the onboard machine control unit, which regulates the machine's hydraulics. SEISMIC senses the characteristics of the material and calculates the optimum frequency required for the best compaction results. Fuel consumption is reduced by up to 55% during job completion, with overall heightened productivity of up to 40%. The increase in efficiency also brings with it more sustainable advantages, like reducing the carbon footprint by up to 55%. Due to lower frequencies, noise levels are also reduced for the benefit of the operator and those in the surrounding areas."

machine. Showcasing at Hillhead Expo 2022, industry experts were impressed with this latest addition to the Dynapac family.

To view the full machinery range, see the website below or contact the Rugby Dynapac office:

T +44 (0)330 678 0185
info.uk@dynapac.com
www.dynapac.co.uk
www.dynapac.com



On the paving side of the business, the new PROTAC spray paver uses technology that integrates the spray feature into the machine. The spray unit is easily activated and controlled via a robust and user-friendly touch display directly on the control panel. The SD2500CS PROTAC applies emulsion using high-precision spray nozzles. The controlled spray pressure reduces mist generation to a minimum, safeguarding the operator and environment. Featuring a 2100l emulsion tank the PROTAC can go from 0.2 up to 1.6kg/m² in spray density.

The Z.ERA program at Dynapac is helping accelerate a continual push towards an emission-free workplace in construction, with a range including two rollers, electric



EMEX The Net Zero & Energy Management Expo Review – Top Exhibitors

Control & save energy

Every building is unique! Each has a variety of HVAC infrastructure & controls, but also a range of stakeholder relationships.

optimise your costs and net-zero need



Each building will need to reach net zero. We help buildings efficiently deliver a comfortable and productive space that occupiers can enjoy - by focusing on the ventilation.

lightfi <https://lightfi.io>

LightFi

LightFi provides cost-effective & easy-to-install solutions for commercial buildings that reduce energy consumption, improve indoor air quality and enhance occupier comfort. We can help you transition to net zero by automating your HVAC systems, using our wireless IoT sensors.

With LightFi's solution, office managers can augment the capabilities of their existing HVAC, allowing more precise ventilation control based on real-time data. Our sensors detect occupancy levels, temperature, humidity and indoor air quality, enabling the building to automatically adjust ventilation rates

to meet the needs of occupants. The right amount of ventilation improves indoor air quality and thermal comfort.

Using LightFi, building managers have been able to cut energy bills by 25% with on-demand ventilation control. This is a must have solution if you are looking to get your real estate portfolio to achieve the net zero targets.

We know each building is unique, and implementing change can be challenging, but we're here to help. LightFi offers pilot projects and expert guidance to help make the transition easier for owners and occupiers looking



to improve occupier experience and deliver on net zero goals.

<https://lightfi.io>

2G Energy

2G Energy AG is one of the world's leading manufacturers and solution providers of Combined Heat Power (CHP) systems with a turnover in excess of €200m.

Based in Heek, Germany, 2G manufactures its own engines from 20kWe up to 550kWe, and container solutions up to 2.5MW.

2G offers CHP supply only, full turnkey and asset care packages through its subsidiaries and partners in the UK, Europe, USA and Asia.

2G Energy Ltd, the UK subsidiary, has installed and provides full service support to well over 200 biogas/natural gas

CHPs across the UK/Ireland. Since our incorporation in 2011 we have grown our specialist team to over 35 full time employees and this is expected to continue. 2G UK projects range from 20kWe to 15MW across leisure centres, hotels,



hospitals, anaerobic digestion plants, manufacturing and industrial sites. 2G has a strong focus on R&D to maximise life cycle benefits for our customers.

Key benefits of a 2G solution include:
 ✓ My-2G – Cloud-based portal for client/2G remote access, transparency, trend analysis and reporting.
 ✓ 2G Master Control System – client/2G visualisation & control of complete scope of supply, eg. steam boiler, absorption chiller, exhaust heat exchanger, etc.

Call Ian Forsyth: i.forsyth@2-g.com or Martin Kenzie: m.kenzie@2-g.com or call 01928 718533 for further information.

Connecting global climate technology stakeholders for a sustainable future

London Climate Technology Show, held at London's Olympia from 19-20 October 2022, is the UK's leading climate tech expo and convention, providing an exclusive platform for the entire global sustainability value chain. The event helped industry stakeholders to network and contemplate upon the course of action to mitigate climate catastrophes through sustainable business solutions, innovative products and advanced technology. The event offered an enormous gathering for two consecutive days for global industry stakeholders to connect with potential partners for achieving their net-zero commitments.

The event made a huge impact on the industry experts and innovators as it witnessed massive sponsorships through virtue of various key industry players with the likes of Honeywell, KEBA, CGF, Inspired PLC, Volvo, Normative, Bezero, Chloros, Airly, Undo, KBR, Appyway and many more.

Apart from this, the event featured a colossal exhibition space for key climate tech players from across the globe to showcase their latest innovations, sustainable products & solutions to a multitude of audiences from the UK and the rest of the world. The key exhibitors included leading



brands like Emissis, Carbonstore, Simble, Earthood, Arena and other emerging startups.

London Climate Technology Show moves this year to London's ExCel from 26-27 September 2023. This is our pick of the best exhibitors from last year's event, listed here in alphabetical order: Carbon8, Compare Your Footprint, LnKIT & Mr Bug. Further details can be found on this page.

<https://climatetechshow.com>



Carbon negative treatment for industrial residues utilising CO₂ inside the Carbon8 Systems CO₂ntainer.

Carbon8 Systems (C8S) has developed a world-leading Carbon Capture and Utilisation (CCU) process based on Accelerated Carbonation. This, circular solution, is used to treat industrial residues, while permanently capturing waste

carbon dioxide. The technology improves the chemical and physical properties of the residues and generates a carbon-negative product that has multiple applications such as in building materials. The process can be applied to many different residues including those from Energy from Waste, paper recycling, or cement manufacture.

C8S' technology treats residues that would otherwise be landfilled, captures waste carbon dioxide, and creates sustainable, valuable products, with a significant cost saving. The technology is proven at industrial scale and was licensed, in 2010, for the construction of three centralised plants in the UK. In 2018, C8S developed a modular containerised solution; the 'CO₂ntainer'. This plug-and-play system is flexible,

scalable, requires lower up-front investment, and can be deployed on-site, treating residues at their source and drawing on the carbon dioxide captured directly from the flue stack.

With over 20 years of award-winning research, containerised and centralised propositions, and numerous clients across various industries, C8S are the first company to have successfully commercialised a mineralisation CCU technology that can treat hazardous industrial residues.

For additional information please contact:
Ffion Rolph, Strategy Director
 at: ffion.rolph@c8s.co.uk or
James Evangelou, Business Development Manager
 at: james.evangelou@c8s.co.uk
 T +44 (0)1634 763821
<http://c8s.co.uk/>

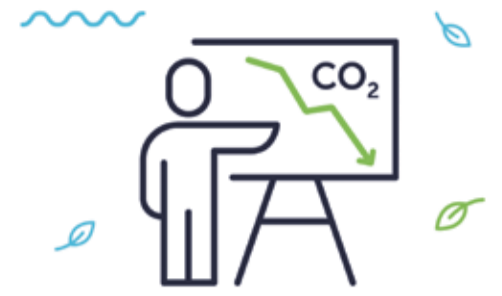
Why bother measuring your company's carbon footprint?

One of the most effective ways to get on your net-zero journey is to measure and reduce the greenhouse gas emissions emitted by your organisation. Calculating your entire operational carbon footprint will help you to set realistic targets that align to climate science.

Reducing your environmental impact will also improve business resilience against climate risk, gain competitive advantage, improve reputation, save costs, secure funding, and attract and retain talent.

Over the years, Green Element environmental management consultancy noticed that many organisations would love to become more 'green', but were held back by the time and financial barriers. They used over 20 years of sustainability experience to develop Compare Your Footprint, a comprehensive carbon calculation software that helps companies of all sizes and industries to better understand their impact, set targets & reduce costs.

"Before Compare Your Footprint, we were paying tens of thousands on consulting fees to Carbon



Footprint our business. We've now saved over 90% on fees and got a better understanding of our data."
 – Nick Mabbutt, Sustainability Manager at All About Food.

Get started and access free resources:
www.compareyourfootprint.com/solutions/

Readers get a special 20% discount off the first year of subscription. Use code SUSTAINABILITYTODAY20 when registering.

Entovegan dog treats with a sustainable twist

Heroes come in many shapes and sizes and in the case of Mr Bug they come in the shape of Devon-born wriggly mealworms that are transforming the nutritional landscape of dog treats, a sector traditionally associated with low grade meats, shameless fillers, salt, sugar and a plethora of synthetic nasties.

Mr Bug's rural insect farm breeds plump, nutrient-dense mealworms that offer more calcium than milk, more B12 than salmon, more iron than spinach and all 9 essential amino acids! More importantly still Mr Bug is starting to foster urgently required jobs to a rural sector too often starved of progressive pioneering businesses.

As a fervent believer in the circular economy, Mr Bug feeds its increasingly revered grubs on Cornish bran, a vitamin-rich by-product of local wheat milling which makes a truly digestible and healthy mono-protein. The resulting frass (mealworm poo) acts as a 'at one with nature' fertiliser that supports the next wheat harvest.

Currently the environmental impact of pet food



production is far from satisfactory, equating to the total environmental impact of a land mass twice the size of the UK.

In stark contrast, mealworm powder with its distinctive nutty twang mixes seamlessly with 'real food' ingredients like parsnips, peanut butter, apples, beetroot, honey & turmeric.

Contact
www.mrbug.co.uk

Climate tech journey

Gathered from around the world, entrepreneurs, thinkers, investors made this London Technology climate show a resounding success. Proudly



showcasing the innovations fronting the climatetech revolution, they reminded us that reducing carbon emissions is a partner's play. LnKIT recently embarked on the climate tech journey, after decades spent in cloud architecture and systems engineering. They were here to launch CarbonLnk, their first carbon and energy monitoring intelligent platform. It automates the difficult process of calculating ESGs across the value chain and displays data in a simple and easy way. Aimed at the manufacturing, distribution or transport industries, the software captures accurately, in real time data from plants, buildings, or vehicles and securely via Carbon time lock for accountability. Its smart energy monitoring tool saves companies on energy costs. The innovation is in the smart AI function which creates energy profiles, energy loss heat maps, suggests energy savings strategy and calculates ROI of Green technology investments. With partners such as Earthood, the world's leading carbon auditor, UN certified and Teeside University, a leading digital transformation and Climate technology research centre, they aim to develop ground breaking energy solutions such as HydroGen, an on-demand hydrogen producing kit for combustion engines currently in development.

M 07852 517367
info@lnkit.co.uk
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Powering the energy system of the future

Solar & Storage Live, held at Birmingham's NEC from 18-20 October 2022, is the UK's most forward-thinking, challenging and exciting renewable energy show. The event celebrates the technologies at the forefront of the transition to a greener, smarter, more decentralised energy system.

The exhibition is the UK's largest renewable energy marketplace, hosting over 150 exhibitors from across the globe, generating solutions to help power the energy transition. This is where key stakeholders within the energy value chain are brought together with the innovators and disruptors to showcase their technology and service solutions needed to enable change at this critical time.

Old supply and demand models of power have already undergone a fundamental change due to technological advancement. In 2018, solar contributed to 31% of global generated power & will only increase along with co-located technologies.

However, the electricity produced by renewables is not always completely dependable, especially solar



being largely dependent on the weather. This is where storage comes in – stabilising the fluctuations in supply and demand.

Solar & Storage Live returns to Birmingham's NEC from 17-19 October 2023. This is our pick of the best exhibitors from last year's event, listed here in alphabetical order: Bee Solar Technology, Green 2 Delivery, Power Capacitors, Solarport Systems, Solar Proofing Solutions, Spotless Water & UK Greentech. Further details can be found on this page & the next.

www.terrapinn.com/exhibition/solar-storage-live

Increase your sustainable technology with UK Greentech

UK Greentech is known as one of the UK's most vital Green Energy suppliers. Distributing quality branded renewables products throughout the country, UK Greentech stocks thousands of products from the world's leading manufacturers.

Available from your local UK Greentech are a number of solutions on Solar PV and Energy Storage Systems that can be designed using its own in-house design capabilities and delivered via its fleet of vehicles to anywhere in the UK.

Its years of extensive industry experience ensures customers



they are receiving the best possible service from industry experts. Boasting a wealth of knowledge on all products such as Solar PV, Heat Pumps, Car Charging, Solar Lighting, Voltage Optimisers, and Battery Storage, whether you're a trade or industry customer, you can be sure to receive the best and most accurate renewables products for your solutions.

UK Greentech was a stand

out exhibitor at Solar & Storage Live 2022, where the team relished the many opportunities that the show offered to establish new connections with future customers and industry professionals, as well as showcase all its latest stocked products.

Contact
T 0333 207 6688
enquiries@ukgreentech.co.uk
www.ukgreentech.co.uk

Introducing the Heliomotion Solar Tracker



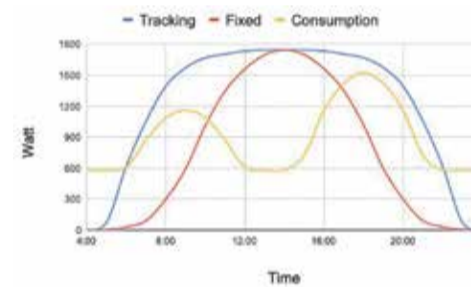
Are your buildings future proof? Are you concerned about massively increased energy prices? Are you worried about climate change and your carbon emissions?

Introducing the Heliomotion Solar Tracker – the efficient, innovative and intelligent alternative to roof-based solar panel systems – winner of 'Best Sustainable Product or Technology Award' from Build It magazine in 2022. Quick to install, no scaffolding or heavy lifting equipment required. Heliomotion was designed in Finland and is manufactured in England, from top grade steel and aluminium.

Unlike roof-based solar panel installation, solar tracking systems follow the sun from sunrise to sunset every day. Not only do they turn, but they tilt to mirror the sun's angle as well. Because they are dual axis, in the UK they generate around 40-45% more electricity than a static ground-mounted or roof-mounted solar panel installation, which is only optimal for the middle few hours of the day. Systems are ground mounted using either a custom steel plate and ground anchors, which we supply, or a concrete plinth. Ground anchors are more eco friendly and

can be installed in less than an hour. If necessary, they can be removed, and no trace is left.

This graphic (below) shows you exactly why Heliomotion generates more power than an equivalent roof top system.



If you are relatively handy, you can install a system yourself in a few hours, but you will need a competent electrician to install the wiring and inverter.

We can supply complete packages which include the system, panels, inverters, solar immersion diverters and battery storage if required.

Heliomotion systems can be used singly or in multiples, either on or off grid. Systems are available in both green and silver powder coating and we usually have them in stock.

System benefits:

- Complete solar energy solution to produce your own electricity
- Straightforward installation (you can do it yourselves if you have some spanners!)
- No scaffolding required
- If you move, you can take it with you
- Premium quality

Our website includes a wealth of information about the trackers, panels, inverters, batteries, pricing, planning and electricity company regulations. The documents page will give you access to all the data sheets, assembly guides and operation manuals. You can also see photos of multiple installations around the UK and elsewhere. Please get in touch with us by phone or email to talk about your solar PV requirements.

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The one stop shop for all your solar panel proofing needs:
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Solar Proofing Solutions



Solar Proofing Solutions is a UK-based manufacturer and supplier of a wide range of solar panel proofing products designed to prevent birds from getting underneath panels and causing damage and reducing panel efficacy.

Our range of proofing solutions are designed to protect solar panels in any environment, from commercial or domestic installations to large scale farms. Our unique range of products provide immediate, long lasting, and effective protection for solar panels. Many of our solutions can be removed by technicians allowing on-going access for servicing, maintenance or repairs.

Our best selling products include:

- Solar Panel Proofing Mesh** – High quality mesh supplied on 30m rolls, available in galvanised or PVC coated.
- Solar Panel Mesh Clips** – Our solar panel mesh clips are now available in 2 versions, permanent push-on fixing or removable screw-on fixing – Available in boxes of 60, ideal for 30m of mesh.
- Solar-Flex Proofing Spike** – A unique proofing spike that quickly matches any roofing profile and provides a secure a clean looking protection.
- Avi-Shield Proofing Spike** – A high quality UK made proofing spike that protects gaps under solar panels up to 100mm.

Visit our website for our full range of products:
www.solarproofingsolutions.com

Solar & Storage Live Review – Top Exhibitors

Cost-effective renewable energy equipment

Solarport Systems is the UK's leading designer and manufacturer of utility-scale solar, modular solar and BESS mounting systems. Powered by UK manufacturing and driven by innovation, quality engineering and extensive industry expertise, Solarport Systems produce high quality, cost-effective mounting systems that are easy to install.

Solarport Systems were the proud sponsors of and stand out exhibitors at Solar and Storage Live Expo UK 2022. Dave Tattershall, Managing Director, delivered a talk on 'Design and technical considerations for utility-scale ground mount systems', alongside the rest of the Solarport Systems team who revelled in the chance to talk all things solar and BESS to new customers and other like-minded professionals as well as showcase some of their products.

From solar PV to battery installation, Solarport Systems have the solution for all ground conditions. The customisable nature of its systems allows installers to seamlessly integrate numerous foundation options to suit all terrains – including slopes of up to 45 degrees. Designed to navigate the most challenging of site conditions, all products are quality assured and backed up by only the best customer service and support.



One notable product revealed at the Solar & Storage Live Expo was 'Modular' – the off-the-shelf solar mounting system that makes site planning, design and installation easier than ever. Modular is a twin-post, 2-in-portrait ground mount system for sites with a total output capacity of up to 1 MW. Modular is designed to utilise most panel sizes on the market, use 5 different foundation options and is held in stock for rapid distribution nationwide.

Contact
T 01308 800501
enquiries@solarportsystems.com
www.solarportsystems.com

The national and eco solution to ultra pure water



A global focus on a greener world has led to an increase in the reliance on alternative energy sources such as solar power. Choosing Spotless Water as a supplier will help to build an effective, forward-thinking eco solution by providing ultra pure water with the lowest environmental impact.

Solar panels, whether in place on a home or larger scale in dedicated farms, require regular cleaning every 6 months to maintain their effectiveness. Each panel loses approximately 50% and, in some cases, up to 90% of its energy generating ability if this regular clean is missed.

Spotless Water's national growing network of filling stations offer a more sustainable option in terms of the filtration processes. Their ultra pure water is chemical-free, adhering to Water Regulation 5 to guarantee the best practice and a cleaner environment for everyone. Plus,

the water doesn't conduct electricity or cause corrosion, extending the lifespan of solar panels and ensuring the safety of operatives during the cleaning process.

Spotless Water has set its sights on becoming the industry leader in sustainable practices within the water tech industry. Their headquarters are run entirely on solar energy, and they achieved carbon neutral status in 2020. Spotless Water is dedicated to improving processes that contribute to a greener environment.

For more information on Spotless Water and the benefits we provide, contact us at: info@spotlesswater.co.uk or call us on our 24 hour hotline 0800 35 76 76.

Green 2 Delivery

Transport is the UK's largest producer of greenhouse gases. With the UK government setting a net-zero goal of 2030, the logistics industry needs a shake up, and huge changes are needed in order to meet sustainability and zero emissions targets.

E-commerce and home delivery have become increasingly popular in recent years, with many retailers moving their stock out of high street stores, and into online-only ordering systems. With this in mind, delivery figures in the UK have increased rapidly, meaning more delivery vehicles on the road, and more fossil-fuel emissions being produced.

Co-Founders, Lee Sibley and Jason Atkins, launched Green 2 Delivery in 2021, with one clear goal – to develop the UK's first nationwide, fully electric 2 person home delivery service, by the end of 2024.

Through a collaborative and transparent business approach, the Green2 team have developed industry partnerships with large names in



sustainable retail, and offer fully tailored delivery solutions to retailers of home furnishings, solar and energy products, and electrical goods.

For retailers that are keen to improve on their ESG rating, an electric delivery solution offers a refreshing alternative to traditional diesel models.

To find out more, get in touch today: sales@green2.delivery



Power Capacitors Ltd are specialists in Power Quality Products and Services, having supported our customers' route to net zero for 50 years. Acknowledged as a market leader in the UK, our reputation for service and reliability is second to none.

Whenever & wherever electricity is generated, transmitted or consumed, Power Capacitors Ltd has a solution available which supports the connection and increases the system efficiency with the obvious commercial and technical benefits. These include Power Factor Correction, Harmonic Filters, Energy Storage Systems and both Low- and Medium-Voltage STATCOM systems.

Our supply partners are predominantly Northern European, offering the reliability and lifetime that is expected of operationally critical power system components. Most systems are designed and manufactured at our Birmingham factory; the flexibility to offer the optimum solution maximises the benefits to our customers in every case.

Our site services team supports this with the survey, installation, maintenance and upgrade of all products covering the whole of the UK from the head office in Birmingham.

Our client base includes Blue Chip companies, Multinationals, and SMEs involved in manufacturing, processing, building, finance and healthcare – our efficiency improving products are found everywhere electrical power is required!

Whatever your project, wherever in the UK it's located, get in touch to learn how Power Capacitors Ltd can support and accelerate your energy efficiency and carbon reduction projects.

Contact: Stephen Monkman, Area Sales Manager
M 07368 225423
T 0121 708 4511
sales@powercapacitors.co.uk
www.powercapacitors.co.uk

WWEM & AQE Review – Top Exhibitors

Environmental monitoring events

WWEM, the Water, Wastewater and Environmental Monitoring show, took place from 12-13 October 2022 at the Telford International Centre, marking 10 years of events. The 10th event was both virtual and in-person and focused on instrumentation and services for water and wastewater process monitoring.

Last year, WWEM ran side by side with the 12th International Conference and exhibition on air quality and emissions monitoring allowing visitors the chance to attend either conference for free both under one roof.

WWEM offers a technical programme aimed at keeping



you up to date with the latest trends, regulations, methods, techniques and technologies and offers a variety of great environments for industry leading stakeholders, suppliers and regulators to showcase their products, offer advice and network with new and potential customers.

Co-located with WWEM, AQE, the Air Quality and Emissions show, is an in person event that focuses on Instrumentation and services for air quality and emissions monitoring. AQE offers a technical programme aimed at keeping you up to date with the latest trends, regulations, methods, techniques and technologies. Furthermore, you can also network with all industry stakeholders including suppliers, regulators and end-users from industry that need to monitor, test and analyse air quality and emissions.

Both shows move next year to Birmingham's NEC from 9-10 October 2024. This is our pick of the best



exhibitors from last year's events, listed here in alphabetical order: ENOTEC & Photonic Measurements. Further details can be found on this page.

www.ilmexhibitions.com/wwem
www.ilmexhibitions.com/aqe

Detect it with UV

As the global water industry moves towards environmental sustainability through digitalisation, we at Photonic Measurements are automating water quality analysis to reduce chemical dosing and carbon footprint by enabling access to data remotely therefore reducing mileage. Our production team are busy building units for drinking WTPs across the island of Ireland, where plant operators are using our probe to get real-time UVT measurements to identify any changes in their process. This allows for predictive correction and maintenance; early diagnosis means early rectification.

We also have exciting projects in the pipeline for monitoring final effluent at WwTPs using our continuous monitoring system made up of the IRIS controller, UV254 probe and flowcell, giving access to discharge data at each site. As well as this we are working with water companies to meet monitoring criteria for Combined Sewage Overflow requirements to meet the environmental authority's targets using real-time data.



Our water quality instrumentation is applicable in many processes whether you're monitoring drinking water, waste water, assessing water filter integrity and even UV disinfection systems effectiveness. We're happy to tailor make solutions to a variety of challenges.

Find out more at: www.photonicmeasurements.com or call on +44 (0)28 4457 2316.

Industry leading process gas analysers impress

ENOTEC has been a leading manufacturer of process gas analysers for more than 40 years. The UK ENOTEC sales team were on hand at the AQE EXPO 2022, to showcase the latest gas-sensing solutions. These robust analysers are suitable for process measurements in power plants, cement plants, biomass combustion, gas/oil, paper and pulp and many other sectors.

The ENOTEC experts, Sean Turner and David McKeown, showcased the latest OXITEC 5000 O2 and COMTEC 6000 O2/COe analysers, complete with precision-driven measurement capability, for reliable combustion control in flue gas conditions. The InSitu measurements are quick, with reactions recorded in less than one second. These cutting-edge analysers are manufactured at the German in-house facility and compliant with ISO 9001.

The probe insertion depth is variable up to 3689 mm depending on duct sizes and requirements, with many configurable options such as filter types and interfaces. With QAL1/ MCERTS and SIL2 (1001) certification, these analysers are an ideal solution for process control and CEMS applications. They are highly resistant against plant vibrations and aggressive gas components and



as the sensors are located in situ in the process, no extraction is required.

ENOTEC was established in 1980 and has grown to become a world-leader, specialising in high-quality process gas analysers. With an excellent reputation for gold standard products and an expert aftersales team, these products offer accurate measurements with low cost of ownership.

For more info, see the UK Sales office details below:
T +44 (0)844 247 0102
enotec.uk@enotec.com
www.enotec.com

Supporting a sustainable future

Reduce emissions. Net zero 2030. Reduce energy dependency. Now or Never. 1.5 Degrees. Heading for a climate disaster. Governments must act now. New energy strategies. The cost of climate inaction.

These are just some of the soundbites from the news in recent weeks as the acceleration to net zero 2030 goals speeds up. With rising energy costs across the globe putting pressure on household and commercial expenses, and the actions of Russia in Ukraine emphasising the need to reduce energy dependencies from overseas, harnessing energy from the Earth's elements is in full focus.



Earlier this year the UK published its strategy for increasing energy independence. Nuclear, wind, solar and hydrogen all play a part in that with strong targets to achieve by 2030; hydrogen capacity to double and solar to increase by up to 5 times the current outputs. The Offshore Wind target is to generate 50GW of energy by 2030, currently sitting at 11GW. These are ambitious targets and that sort of commitment is going to take some serious infrastructure installation projects.

The UK are not alone in the push to renewable energy, especially offshore wind. The USA conducted an offshore wind lease sale off the coast of New York, fetching over \$4 billion, a major step in the US push to renewable energy. In March we saw a new study reveal that the Asia-Pacific region's wind energy sector could soon account for nearly a quarter of their power this decade, with China set to be the largest market by 2030. And in the same time the Government of India announced funding for a offshore wind energy test facility by India's National Institute of Wind Energy (NIWE). Since the conditions in Indian waters are different to those experienced in Europe, there is a need to perform testing to ensure wind turbines are designed for their best performance.

The future of offshore wind is looking bright, and busy. But to make this energy truly sustainable, preventative asset protection is vital to ensuring longevity.

The push to offshore wind is to take advantage of the power of the wind produced at sea, moving at a much higher and more consistent speed thanks to the open space and absence of structures. What is a benefit to production, however, poses a logistical disadvantage to construction and maintenance along with an aggressive corrosive environment. These increased offshore developments will see stronger winds and bigger waves, beneficial to production, but adding pressure to not just the installation phase, but ongoing operation and maintenance.

In this corrosive environment a wind turbine can see corrosion



start in many different areas – monopiles, ladders, walkways, boat landings, guard rails and rotor heads – each of which can compromise the overall integrity of the structure. Protective coatings that can be applied to prevent corrosion from developing, or halt its progression, are essential to providing long term asset protection.

And as we have seen in many other industries, a major consideration to the ideal protective coating is surface preparation. The need for aggressive blasting to apply protective coatings is a burden in these confined & hostile environments, let alone the contamination to surroundings. Preventative coatings that can mitigate this issue are a major step forward, combine that with ease of application & minimal manpower and offering benefits to time, long-term protection, costs and production.

One brand paving the way to simpler futures is Easy-Qote; a brand on a mission to change the way corrosion prevention is viewed, and conducted, with it being applied simply as a patch.

With traditional approaches we would see a variety of materials and equipment brought to site: surface preparation tools, coatings and application tools, rope access equipment and PPE.

In the case of Easy-Qote, one individual or small team is armed with a wire brush and a roll of patches. Simply brush loose corrosion away, apply the patch and return to base. No blasting is required avoiding the all-important issue of environmental contaminants. Overhead costs will be greatly reduced with transportation and manpower costs down. Instead, protection is immediate and with a service lifetime of 25-30 years, the asset can now reach its full potential with long term protection.

These ambitious targets for 2030 will take swift and dedicated action, and it should be done with longevity at the core. A sustainable future is not just working with greener energies and renewable sources, but it involves extending the lifetime of assets and existing infrastructure, so that they can carry out their duties long beyond what the environment might normally allow.

Put simply, with Easy-Qote, we are committed to helping the wind energy industry reduce failure from corrosion issues, improve productivity, longevity, and as a result, make renewable energy truly sustainable.

Laura Hall, Senior Marketing & Communications Manager, Seal For Life Industries

Somaieh Salehpour, Vice President Technology and Strategic Marketing, Seal For Life Industries

info@sealforlife.com
www.sealforlife.com



CSG: Waste management

Engaging with a specialist waste company can help businesses reduce overheads and increase profitability. That's the view of Helen Bentham, National Accounts Manager at leading waste management company CSG, who said many businesses squander manpower by double-handling waste.



Helen said, "One of the fundamental mistakes we often see is businesses treating their waste as household waste when, in reality, it needs to be viewed completely differently. Businesses tend to get bogged down in segregation as you would at home with a bin for every single waste stream. Trade waste is not so much about that. Of course, it is important to segregate waste, but the fundamental principle should be to eliminate as much waste as possible."

"The first thing we do when we visit a new customer is to conduct a waste mapping exercise and determine where waste streams can be eliminated or reduced. We'll then look to streamline the disposal of the remaining waste and examine whether some materials can be reused

or recycled. The savings can be very significant."

Helen said engaging with a waste specialist has other benefits rather than just the bottom line, including obtaining accreditations, such as ISOs, and impressing customers when they visit site.

CSG offers a total waste management solution that stretches well beyond collection and disposal. Combining a range of waste management disciplines such as hazardous waste removal, industrial cleaning, emergency response and waste system maintenance, CSG minimises the amount of waste that ends up going to landfill.

www.csg.co.uk



MP visits GJF Fabrications

Aldridge-Brownhills MP Wendy Morton arrived at the Chase Link, Brownhills manufacturing plant to discuss its ongoing investment developments and growth strategy. After being given a tour of the plant, she was thrilled to see how GJF has adapted its production processes post-pandemic.



Wendy commented, "I was delighted to meet Dougie and the team, they are a valuable employer in my Aldridge-Brownhills constituency and provide a respected service to their clients. I very much look forward to visiting again in the future with the Mayor of the West Midlands, Andy Street."

Established in 1988, GJF's main services include the design and manufacturing of steel Hooklift containers, compactors and skips. Serving leading waste companies such as Biffa and EMR, as well as disposal and treatment, offshore oil and gas services, as well as local authorities, GJF is proud of how it has navigated itself through COVID-19 surviving the challenges, supply chain shocks and general economic uncertainty.

welcome Wendy back to our Brownhill's site. We were fortunate enough to rely on investor support in securing steel alongside the Government's support package that allowed us to keep our customers happy."

He also went on to thank MP Wendy Morton for her response to a request for help in recruiting workers with correct skills. "The solution provided in conjunction with Walsall Council and Walsall College provides a framework to support ongoing growth. We look forward to building on this throughout this year and next," added Mr Craig.

Mr Craig said, "We were delighted to

www.gjffabrications.co.uk

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Ulster Shredders

Ulster Shredders, leading supplier of industrial shredders, have kickstarted 2023 with officially opening their Research & Development Facility at their headquarters Cogry Works in Toomebridge, Northern Ireland.



"Customers are at the forefront of our business, and we wanted to take the extra step in providing them with a 'testing before investing' service. Seeing in believing & with the addition of the Research & Development test centre we will continue to give our customers confidence that in choosing an Ulster Shredder they can be assured of the quality & consistency of our products," said Sales & Service Director, Paul Atkinson. Adjacent to the existing 40,000ft² manufacturing facility housing their dedicated CNC machine shop & assembly area the 5,000ft² building has been commissioned & designed to facilitate the testing of products that can be safely viewed by their customers to see the shredded output. The R&D facility houses the full range of shredders, conveyors and hoppers.

Ulster Shredders produce a range of shredders & ancillary items tailored to meet the needs of their customer requirements. With the new facility, the model & shredding chambers can be configured in a manner to demonstrate pre & post shred materials & throughputs & give their customers a tangible output of their infeed materials ensuring when investing in an Ulster Shredders they can do so confident that the equipment can meet the needs of their business.

To read more about Ulster Shredders' new Research & Development Facility, visit: <https://ulstershredders.com/ulster-shredders-opens-new-research-development-facility/>

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Expert shredders keep the nation shredding



Sustainability Today is delighted to award Mach Tech Services with our coveted Recycling Shredders Company of the Month Award for outstanding waste recycling shredders.

Mach Tech Services was founded in 2004 by Managing Director, Joe Hoyle, Operating Director, David Ingham, and the late Colin Wood, as a service company for industrial shredding machinery. One of its partnerships is with Austrian company Lindner Recyclingtech; this leading specialist business offers award-winning Lindner machines to recycling industry sectors. Mach Tech can supply static shredders, plants and mobile shredders to businesses.

The waste recycling sector is under scrutiny as the UK moves rapidly towards a more sustainable future. Plastic film made of polyethylene and polypropylene is often the villain in recycling, with its short product life cycle accounting for at least 40% of global waste. There is a need for efficient, robust plastic recycling and the latest Lindner Jupiter BW shredder is the best model on the market: the Superhero of shredders.

Showcasing the Lindner Jupiter BW at the K 2022 Düsseldorf Expo, Lindner Recyclingtech proudly demonstrated the shredder's prowess to interested delegates. The latest Jupiter series expertly handles plastic film recycling for downstream NIR sorting processes. This primary shredder has a powerful countershaft drive that releases powerful rotational energy, meaning less overall energy is consumed. This precision-driven machine has a long service life, with minimal maintenance costs, making this a smart investment. With robust duo cutting counter knives and scrapers cutting plastic film into A4/A3 sizes, this is a state-of-the-art shredder for rigid plastic films. The new Jupiter BW is fitted with mesh screens, easily accessible for manually adjusting to different sizes.

Mach Tech has an impressive 27,000ft² facility at its headquarters in Oldham, Greater Manchester. The premises has a world-leading parts facility,



storing everything from nuts, bolts, washers to cutting tools. With an unrivalled range of parts for shredding machinery across the UK, Mach Tech is a one-stop shop for all your shredding needs. Within the facility, are fully operational servicing and fabrication workshops, paint shop and a dedicated sale and customer care team.

We caught up with Lorenza Falcini to find out more, "Mach Tech has always been a service inspired shredder specialist business and the sole arm of pioneers Lindner recycling tech for the UK.

"We supply static shredders & plants and mobile shredders. Our products range across alternative fuel solid recovered fuels (SRF), refuse derived fuels (RDF), waste wood, plastics, paper and metals recycling.

"We are able to offer the complete solution for all shredding needs, from consultation to installation, repair, & maintenance, all carried out by a team of experienced and dedicated recycling industry engineering and sales specialists."

In addition to the Lindner range, Mach Tech remanufacture machines, giving extra life to equipment, helping businesses maintain equipment in the manufacturing supply chain for longer. With full servicing and repair, available on Lindner and all other shredders across the UK and Ireland from expert engineers, Mach Tech have deservedly earned the reputation as a complete solution waste recycling shredder business. No job is too small or large, with the fully equipped parts facility range.

The award-winning Lindner range is robust and reliable, offering companies peace of mind that these shredders can recycle quickly and safely. The Jupiter BW has a torque-limiting clutch, quickly protecting against drive unit damage, when foreign objects obstruct. Precision-driven sensors guide the controlled powering down of the shredder to safeguard components.

Mach Tech is committed to excellent design engineering and has added a precision engineering department to its Oldham facility, Lorenza tells us more, "We have a long-established department at HQ dedicated to precision engineering.



"From involvement in projects at the design stage to tool design and manufacture, and even mass-produced component parts, our engineers' vast experience allows us to share with our clients bespoke advice regarding the material used, design and production, as well as problem solving.

"Having our own in-house precision shop also allows us to manufacture parts for shredding machines if and when required."

Mach Tech has an impeccable record for recruiting and retaining excellent staff, as demonstrated through its dedicated mobile machinery sales staff: on hand for any queries or support across the mobile machinery sector. Lorenza was also proud to tell us about the apprenticeship scheme, "After a two year apprenticeship scheme, our first apprentice is now working with us as a trained Mechanical Engineer. With the added bonus of being trained directly from Lindner as well.

"By training the next generation of engineers, we are continuing to offer the same dedication to service and products that are unrivalled in quality and endurance."

Alongside the Oldham facility, there is a sales office covering the southern sales and customer care area, offering quality specialist advice and support across all sectors.

Mach Tech prides itself on offering outstanding customer service, as Lorenza outlines, "We have an open-door policy which allows interested parties onto our existing customers' sites to see our products in application and gives the freedom to speak to existing customers about the product and our services that we provide."

Hamilton Waste and Recycling in Scotland is a leading recycling business and needed a shredder for mixed waste on its site, they were delighted with the Lindner shredder provided by Mach Tech, as Hamilton Waste and Recycling Manager, Ken Chrystal, elaborated, "It's now more important to us than ever to invest in the best technology, which can keep up with the pace at which our business is growing. Mach-Tech Services and Lindner Shredders fit well with our practice. We look for overall reliability in a machine, limited downtime and long-lasting wear parts and we feel that our Lindner shredders have lived up to exactly what we were sold."

The Hamilton Waste and Recycling team rated the professionalism of Mach Tech from the initial sales enquiry, through to expert installation and dedicated after-sales team.

Mach Tech endeavours to work at only the highest-level: always offering consummate professionalism and compliance.

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