Winter 2023/24

ISSUE No.101

Insite

Insite is the official magazine of PEIMF+

PEIMF+
The future of fuel and energy services

In this issue :

Decommissioning • Commercial fuel management

Bespoke products • Every front cover cartoon for 10 years!

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101 not out!

Ever since our founder members first created the concept of the PEIMF, over 25 years ago, we have maintained regular contact through the membership. Originally with a newsletter, which swiftly became INSITE. We kicked off with

This developed into INSITE through the guardianship of our friend Frank Hare, which I took over as editor in Autumn 2014.

My first issue

You can enjoy all the covers over the past 10 years on pages 38 – 41. What's your favourite?

So it's onwards and upwards for PEIMF+ and all our members. Thanks to everyone involved.

Enjoy this first read of 2024, as we highlight our members specialising in Site Decommissioning, Commercial Fuel Management and Bespoke Products, plus 'The Green Pages' our popular new fuels supplement.

So finally, happy new year to all our readers. Let's look forward to a prosperous and safe 2024.

David Honeyman, Editor

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Front cover illustration
Brian Sage

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The Green Pages New Fuels Guide

8 pages packed with specialist information on new fuel technologies

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PEIMF+

Advertisers and the suppliers of contributed articles are asked to ensure that material submitted is fair and accurate at all times. The Editor reserves the right to amend or withdraw such material which may not comply with this request after consultation.

Annual technical update

PEIMF+
The future of fuel and energy services

Blue Book review

Of all the technical projects in 2023, far and away the biggest has been the review of the Energy Institute Code of Practice entitled;

'The Design, Construction, Modification, Maintenance and Decommissioning of Filling Stations'

Commonly known as the Blue Book, this is the fourth review and will result in the publication of the fifth edition.

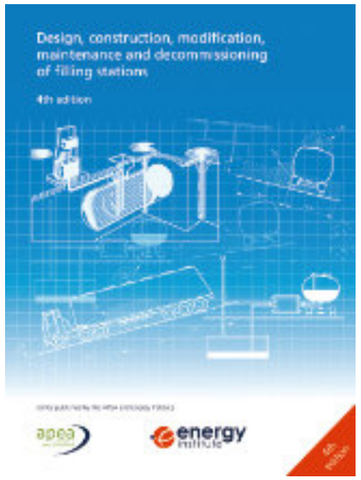
At the beginning of the year, twelve sub-groups were formed to conduct the review of the various sections and re-draft where necessary, before handing it over to the main steering committee for approval. When the steering committee approves the re-draft, it will undergo a full stakeholder consultation for comments. As currently projected, the likely date for the publication of the next edition is Q2 2024.

Forecourt flooding

PEIMF+ members have been called out in various locations to deal with the damaging effect of flooding on forecourts. The unexpected force of nature affecting their sites has incurred significant remediation costs after vehicles broke down, bringing their owners with claims of vehicle damage.

The water ingress has mostly been caused through flood water entering tank access chambers, where subsidence had led to a low point for water to drain to and find a route into the tank via worn joint seals.

energy institute



Storage certificates required?

An irritating problem for contractors has been the PEA insistence of the need for a storage certificate, in locations where a petroleum storage licence had not previously been required. Sites, which had minimal capacity storage facilities for the use of equipment and vehicles used by the business, had not previously required a storage licence under PCA.

However, with its repeal in 2014, the terminology of the PCR which replaced it became a debating point for interpretation. Working with the Petroleum Enforcement Liaison Group, HSE has drafted a flowchart to be used by PEAs to determine where a storage certificate should be required.

EV charging on filling stations

Recently published by the Energy Institute is;

'A Site Operator's Guide to Electric Vehicle Charging Equipment at Filling Stations'.

This will provide helpful advice for site operators planning to install EV chargers, where there is a need not to compromise safety alongside other hazards, through the storage and dispensing of vehicle fuels.

It will help them to understand the key elements of risk, when incorporating the facility with its own hazard zones into a forecourt containing existing hazard zones. Copies will become available from the Energy Institute.

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In the frame...

We welcome Mark McLeary, Group Managing Director of Berrys

Mark, tell us about your present role

I have been Managing Director since January 2023, after 10 years as Operations Director

How come you're in the industry?

You could say I've been around the industry since leaving the womb. My father has been employed by Berrys since 1974 - seven years before I was born! So during many school holidays I'd be at Berrys either pottering about the stores, or going with my dad to complete deliveries. One of my earliest memories was going with him to the Isle of Wight - delivering what I now know to be galvanised tube. Dave Berry said ring him when I left school if I wanted a job. I did!

Your career to date

I joined Berrys on Nov 3rd 1997. Working in the stores, but helping out everywhere. A couple of years later I spent a lot of time with Martin Berry assembling and trialling components for the ATLAS range. The product was put to market in 1999 and I became ATLAS coordinator. The demand was such, that within a couple of years I became ATLAS Manager, with 4 staff members.

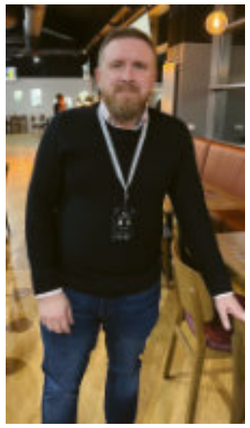
Demand grew rapidly with the addition of FillMaster, VentMaster and Easy Riser. I was promoted to Operations Director 2013 with overall manufacturing responsibility, and held that role until becoming Managing Director last year.

Which role have you enjoyed most?

Each role has had its own positives. I hold my current position with the most pride.

What do you feel have been your biggest achievements? (modesty allowed)

Tough one! Starting from literally the bottom (I was collecting the staff sandwiches from the local café within my first hour at the company) and working my way up to MD is something I'll always be able to reflect on with pride as a great achievement.



From a general viewpoint, it's an achievement whenever any quote/ tender you've submitted comes back as a PO from the client. However big or small. This may be a niche industry but it's extremely competitive.

Pricing is of course key - but so is customer service. I'm proud of the team in as much as no request or call is too big or small. This is vital to why the company has historically, and continues to be, the "go to" business for the vast majority of fuel station contractors.

What have been the most significant changes in the industry during your time?

Environmental regulation improvements have been a constant throughout: from steel to poly pipe and fittings, jointing compounds, single skin to double skin pipe, leak detection and monitoring. We are at the forefront of designing products to meet the ever-changing criteria.

What do you think the future holds for the industry?

Not so long ago I'd have said EV without question. I believe t he realisation has started to hit home that all the government targets are not going to be met. Fuel station development, and even new to industry sites, continue to receive significant investment and are at a similar rate of build to 3 or 4 years ago. ICE vehicles will be around for decades to come in my opinion. I expect cleaner synthetic fuels to be introduced and we always consider this when future proofing our products and designs.

Where do you see yourself in say, 10 years?

I never look that far ahead, who knows what tomorrow brings. As long as my family and I are happy and healthy

And in your spare time?

With 6 children between us, my partner Gemma and I can sometimes forget what spare time is! When we do have some time, you'll usually find us in the Holte End at Villa Park watching the Aston Villa revolution ✊. I like to watch stand-up comedy, and true crime documentaries. Quite a distance apart on the genre spectrum.

What about a philosophy of life?

"This too shall pass." Be patient, not angry. Grudges are too heavy to hold. It will always get better - eventually.

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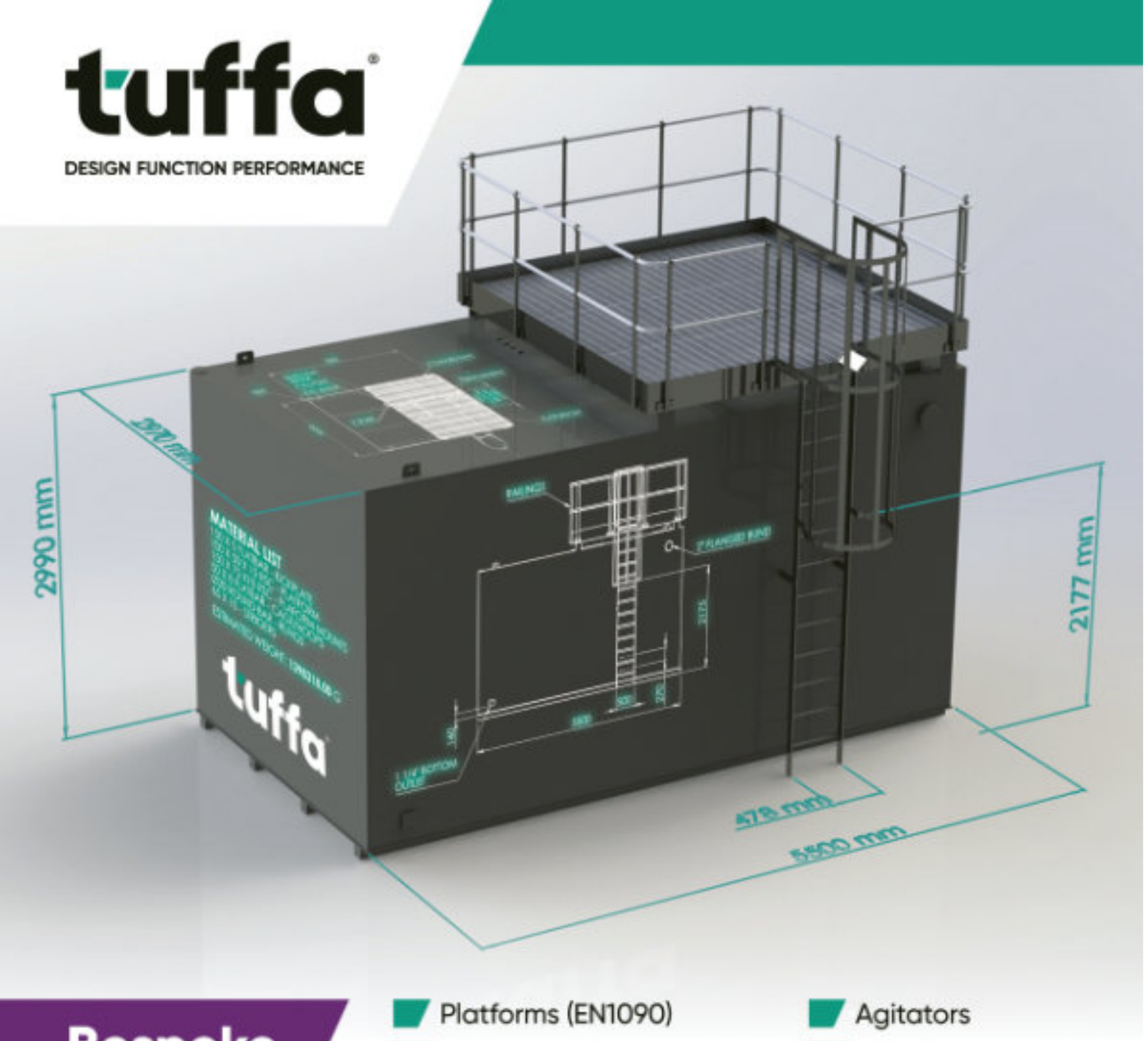

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Why do people resist safety messages?

Some things to think about if you're a company safety advocate!

By Steve Martin, Managing Director of Cope and Xmo Strata

All of us who are passionate about safety-in-the-workplace have experienced situations in which safety messages are resisted.

Something is too much trouble, too expensive, too time-consuming. Safety protocols are for snowflakes and bureaucrats. In the real world we can ignore them. It's something you have to say, but no one actually does it. Or yes, I know all that, but it has to be done fast so on this occasion can you just ignore it?

Etcetera.

But it's actually about preventing death and injury, and reducing corporate risk and liability, so why on earth do some people reject a safety culture?

Understanding why, and tailoring your messages accordingly, may help to make your messages bite deeper and have greater effect. So as someone who's experienced all this, here are my observations. In each case, I outline the issue – and a method of dealing with it in bold, in the last paragraph.

If you have other thoughts not listed here, please share them!

Why reject a safety culture?

1. Many messages are repetitive, unimaginative, tedious, and lacking in creativity.

The fact that you're an expert on safety doesn't make you a writer, presenter, teacher, or guru. Our brains filter repetitive messages, couched in unoriginal me-too language;

"I know that, so I don't need to occupy processing time on it".

For the record, AI-generated safety-related articles ALL seem to come into this category (dull as ditchwater and unoriginal).

If our brains didn't filter, we'd be overwhelmed. The average commuter is exposed to thousands of advertising messages every time they travel to work (billboards, traffic signs, shops, news media; everything from vehicles and clothing to food. There's even branding on mundane items like elevators, train carriages, shopping bags and manhole covers

Everything is branded, marketing is shouty, every company in the world wants your attention. So, you filter, and one filter is "nope, I've already heard that".

If you can present safety messages with originality, humour, or creativity, they may meet less resistance.

2. Generalised messages seem irrelevant.

Specific messages about particular industries are more effective for those working in that industry. In (for example) our industry, we can do that to some extent ... but safety campaigners working across sectors would struggle to do so cost-effectively because it addresses so many different sectors.

To avoid this, make safety messages specific and be careful only to target the people directly affected by the risk you are addressing. Tell real-life stories of named and fully identified people wherever possible (but make sure you have their permission beforehand).

3. We don't want to be controlled or micro-managed - and so many safety messages come across as patronising or obvious.

As a species, we quite often organise ourselves under dictatorships, rather than democracies, and we join uniformed services, companies, clubs, or societies in which rules and discipline are imposed to varying extents. But (paradoxically) we are wedded to concepts of liberty and individualism, and messages urging us to be safe by engaging in super-careful behaviour conflict with that.

Pilots who fly fast aircraft take inherent risks, yet abide by more safety protocols than most of us; and do so willingly because these things aren't presented as restrictive, they're presented as a means of accessing an activity which they love.

4. We're programmed to love risk - so that the human race can make progress.

We like motorsport and motorbikes. We have extramarital affairs, even when we don't want to divorce our spouses. We're glued to movies about alien invasions, warfare, spying, gangsters, and violent, dystopian futures. We go parachuting, skiing and hand gliding for fun. We play with paint guns and go to war on computer games. We climb mountains, and explore space and the deep ocean.

Continued on p10

Continued from p9

And if we don't do these things ourselves, we get a second-hand thrill by watching on TV as others do them. We do all sorts of risky things, measuring the risk against the reward (like starting companies on borrowed money and maxing out on mortgages on properties we can't really afford).

We don't want to eliminate risk, because without it, life wouldn't be as interesting. It's a statement of the obvious that risk can't be eliminated and some safety messaging seems to imply that this is the intent; people will simply reject messaging that they see as hopelessly unrealistic.

Pragmatic safety messages about identifying risk and mitigating it, so that risks can be managed, will face lower rejection levels.

5. Desensitisation.

We live in a world of nuclear weapons. There are (currently) two major wars in progress, in Ukraine and Israel/Gaza, and multiple smaller conflicts, and we get real-time 24-hour news broadcasts about them. We know more about traffic accidents, earthquakes in places far away, famine, organised crime, extremist politics, tragic health outcomes and life-threatening conditions than any previous generation.

We have a climate crisis and terrifying weather extremes. All these things are thrown at us, in detail, with video, and are then analysed in detail by panels of TV talking heads and social media warriors. Set against these global threats, the parochial risks associated with workplace accidents may seem less relevant.

Safety messages which play less on fear, and more on the satisfaction from a professional job, done really well, to the best standards, by the best people, may be more effective (presenting good safety protocols as a sign of a true professional).

6. Overcomplexity.

This article is aimed at a tiny percentage of people; safety conscious leaders who are literate and questioning. Most safety messages are aimed at 'ordinary Joes and Jennies' going about their business, trade or profession. Busy, hassled, distracted people won't read complex messages (unless they have high relevance). Some may not even be that literate, even if they are at the top of their particular game.

The best safety messages are simple and short (but very, very hard to do well).

7. Cognitive dissonance – which means that the message conflicts with peoples' existing beliefs and life experience.

People tend to consume the media they already agree with. Trump supporters are less likely to watch CNN (even though it's trying to report Conservative politics more comprehensively).

If you give people a message which conflicts with some deeply held personal belief, they're likely to dismiss it. Whatever we like to think, we're actually not open-minded. The industrial world is becoming more safety aware and some who've been at work for a decade or more have inculcated values, traditional ways or working, and beliefs, which are challenged by "new" attitudes to safety.

Careful crafting of safety messages so that they knowingly acknowledge conflicts, and address them with diplomacy, or so that they are presented as 'additional to' rather than 'contrary to' existing methods of work, can help to alleviate this intuitive obstacle.

Here's a summary:

1. Tailor your messages to the specific concerns or your target audience. Generalised messages can sound patronising, irrelevant and tedious.

2. Make your messages relatable. Tell real-life 'people like us' stories wherever possible. If you can (and only ever with their consent) use names and full identification (job, region, age group etc). "My pal George" stories abound on social media and are usually (rightly) dismissed as bogus.

3. Safety messages are more powerful if they are framed as mandates which empower individuals rather than instructions which restrict freedom. Corporations will find this difficult – they like to issue instructions which can later be used to indemnify them if things go wrong. But clever, skilled communicators can merge these requirements.

4. Safety messages are more effective if they balance fear-based content with positive reinforcement, highlighting the benefits of safety protocols and framing them in a positive narrative.

5. Be clear, concise, and keep it simple (this isn't easy).

6. Use common ground with the target audience whenever possible. Understand, and avoid conflicting with, existing values and beliefs.

You can check out Steve Martin's companies here –
Cope (www.GetCope.com);
Xmo Strata (www.xmostrata.com).

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CTS unveil plans for new division in the Middle East

With over 35 years in the fluid handling market, it's no surprise that Centre Tank Services have made a name for themselves as a leading supplier of fuel equipment in the UK. But with firm roots in Britain, and a continuously growing group, they have now set their sights on the overseas market; by unveiling a new division in Saudi Arabia.

After having some great successes in the Middle East, following the ADIPEC exhibition and some visits to the region, they followed this up with targeted campaigns to their contacts and grew their clientele from there. However, being based in a different country thousands of miles away, meant that some elements of being a fully functioning business in the area weren't always possible.

CTS spotted a window of opportunity to open a division in Saudi Arabia with Sales Manager Gurdeep Lakhanpal moving out there. And by having an employee on the ground in the Middle East, it allows CTS to start exploring the possibilities the region holds in more depth.

A growing marketplace

Talking about the news, Managing Director Matthew Terry said:

"Expanding into a growing market where we have already seen some success is a great next step. But investing in a colleague and friend who has been instrumental in the 9+ years he has worked here, takes us into a whole new chapter."

Gurdeep has been instrumental to the growth of the business since he started in 2014, where he started out in the technical department working with Rob and Trevor. Fast forward four years and he took over as Sales Manager; growing relationships with customers by having a technical understanding of individual requirements, and providing product training with a two-pronged technical sales approach.

His move to the Middle East is both exciting on a personal level and for the business. On describing his feeling about the move, Gurdeep said:

"This is a huge move for myself and my wife. The thought of being so far from family and friends, the life we have known, can be daunting for some. But we are embracing this massive adventure and looking forward to laying down new roots.

As we step into this new chapter as a business, I am confident that my expertise will play a pivotal role in driving the success of our endeavours in the dynamic and promising Gulf market. Our expansion is not just about reaching new horizons but about seizing the immense potential for growth and innovation in the vibrant markets of the entire GCC."

Priority in the UK

Whilst a new division in the region is undoubtedly exciting for the business and the customers they already have in the Middle East, Matthew explains that this won't change their priorities here in the UK. He said:

"After seeing many positive changes and successes in my 25 years at CTS, this must be up there with the most exciting. Expanding into a growing market where we have already seen some success is a great next step.

"There is always a risk in expansion, but if we can focus on the business values we have built up over the years here in the UK, it gives us a good foundation. However, this does in no way change our focus and priority on our UK customers who we will continue to strive and be a valued supplier ongoing."

Gurdeep is due to move to Saudi Arabia at the beginning of January and will be stationed in the capital, Riyadh. CTS look forward to updating customers further in the first quarter of 2024.

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Hytek and Tecalemit. Building fuel management excellence

At Hytek, we're not sure we could be any more passionate about excellence in fuel management. Regular readers of INSITE may well have seen our editorial in the Autumn edition that looked at our own FC10 and FC20 Fuel Management Systems; but you may not be aware that we offer many more solutions. No matter what your customers' fuel management needs are, we want to be able to provide solutions that work for everyone. Any setting, any need, we've got you covered.

As part of our ever-expanding offering, we are delighted to be an authorised UK distributor service and technical centre for the first-class Tecalemit Fuel Management System. It's a product that we have admired for quite some time, so are delighted to have been chosen by them as an authorised UK distributor.

Before we get into some exuberant fanboying on why we love their system so much, it's also worth pointing out that, as well as offering their products, we are fully authorised to offer their training courses at our HQ (a ten-minute drive from Stansted Airport in case you didn't know).

Impressive German engineering

Back to the beauty of the Tecalemit system. As you would expect from a German business, the engineering behind the product is impressive. The product comes fully configured and ready to use; it's the very definition of plug and play. It comes with tags and a pin code entry system, the software can store up to 10,000 transactions and it has an impressive maximum user capacity of 4,000.

One of our favourite things about the product is that its reporting capabilities are anything but standard; it's flexible and customisable to meet your customers' unique needs. The main dashboard gives a good overview of your customers' fuelling data, across multiple sites. It has great stock monitoring capabilities, allows book stock (manually adding fuel deliveries), viewing of book stock and information on tank levels. Your customers can choose when their data polls, from anywhere between hourly and daily. Reports can be customised and exported to .csv files or PDFs.

And when it comes to your customers' user experience it's equally impressive. You can set high and low-level fuel alerts with email alerts; remotely set up, edit and deactivate specific tags or the whole unit; restrict vehicles or drivers to specific sites or fuels; and limit the amount of fuel that can be dispensed, amongst many other functions.

The system has also been built in a modular fashion, to allow a number of different combinations of add-ons. You can take the FMS terminal only; add a kit to that which comes with a tank level probe with +/-0.5% accuracy, a fill module, an integral GSM modem and 10 tags; the FMS terminal with a pump that offers a fuel dispensing meter with an accuracy of +/-0.5%; or the all-singing, all dancing, pump with integral FMS kit. This offers the lot and the ability to make you a cup of tea (we made that bit up for dramatic effect).

We're with you all the way

No matter what set up you offer your customers, our support is unwavering. From the early stages of enquiry, right the way through to the sale (and well beyond), our service team will help your customers maximise their new piece of kit. We'll help with set-up and commissioning; provide online demonstrations via Teams that shows how to make the most of the software and reporting; and we'll even join you on a call with your customer if you'd like us to.

Finally, it's worth knowing that the first-year hosting in the cloud and SIM cost is free and then it switches to an annual fee that ensures the FMS software remains up to date.

If all this sounds like something you'd like to find out more about then just get in touch to have a chat on: +44 (0) 1279 815 600. Please note, Hytek only supplies the trade.

www.hytekgb.com

The new
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We asked our customers about whether they felt, in the digital age, we still needed a good old fashioned printed catalogue, and the resounding feedback was that we did. And that was all we needed to hear.

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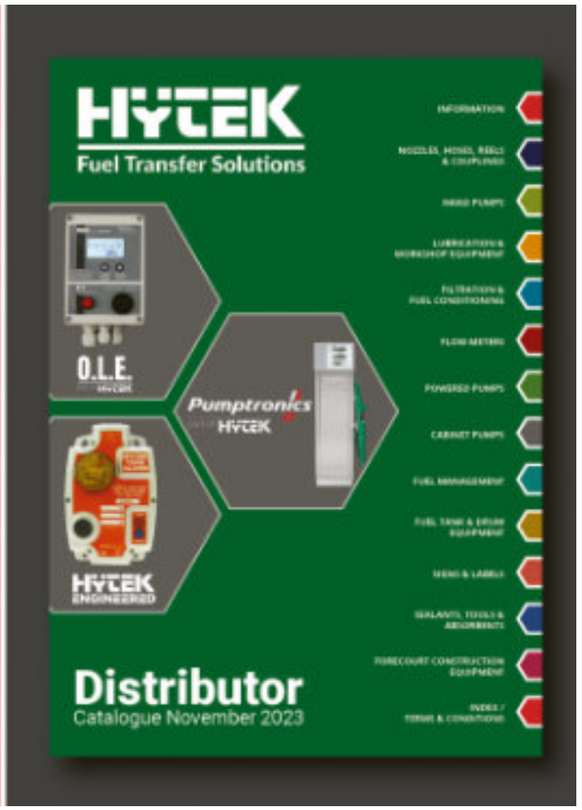

Setting global hydrogen standards at the UN

Robin contributes to crucial international standards at the United Nations

PEIMF+ committee member Robin Futcher has become a leading figure, worldwide, in establishing hydrogen standards. Our members are extremely fortunate to be able to benefit from his vast knowledge of commercial fuelling, and now this vital new technology. Here he outlines his latest acknowledgement.

"I am honoured to share with you a defining moment in my professional career.

I was invited to UNIDO, a specialised agency of the United Nations headquartered in Vienna, to contribute to global hydrogen safety standards. It's an incredible opportunity to represent Commercial Fuel Solutions Ltd and contribute to a global initiative.

I have been collaborating with fellow hydrogen refuelling engineers and experts from across the globe, to peer review the highly anticipated ISO 19880-2 standard for hydrogen dispenser construction.

This standard is crucial for shaping the future of sustainable energy, and industrial hydrogen fuelling, at an international level.

UNIDO plays a pivotal role in assisting countries with economic growth, especially in promoting sustainable industrial development. With their permanent presence in over 60 countries, their impact is globally significant.

Being a part of this initiative is not just a personal achievement, but is also a chance to contribute to a larger cause; a sustainable and industrially developed world.

I am eager to exchange insights, learn from global experts, and bring back valuable knowledge to further advance our work in the field of sustainable energy. Stay tuned for updates on this exciting venture!"

www.commercialfuelsolutions.co.uk

Octane win major award for MOD project

Redevelopment brings Thorpe Camp MTFI up to standard

Deserved winners having a great night

PEIMF+ member, Octane, are so delighted with the recognition of their role on this outstanding installation, and the award given by their peers at the APEA, that they would like to share their pride with our readers.

Octane Holding Group Ltd are humbled, overwhelmed, and thrilled to have won the prestigious APEA best new fuel installation (non-retail) award at the APEA Live 2023.

Winning this award is a true testament to the collaborative dedication and innovation within the Octane team, and is a culmination of months of hard work; from tender award to commissioning.

This project was a redevelopment of the existing mechanical transport fuelling installation (MTFI) in a remote location, just off Thorpe and Wretham MOD training facilities. The existing MTFI required major redevelopment and upgrade to bring the facility up to the best current UK and DIO/MOD standards.

The significant increase in footprint makes this installation the largest MTFI across the portfolio of training facilities managed by Landmarc Support Services Ltd. With over 4,300m2 of new concrete surface area, a vast drainage network underground, new fuelling lanes and dedicated wash bays, this facility has been purposely designed for fuelling up to eighteen multi type vehicles in quick succession.

To give you an idea of the size of the site, it is surrounded by over 350 metres of perimeter fencing and 3 automatic gates to allow for safe access and egress. It was our pleasure to provide the Ministry of Defence with an efficient and modern fuelling facility that will operate long into the future.

Vast wealth of experience in-house

We would like to say a huge thank you to our team here at Octane who drew on a vast wealth of experience, all within our own business, throughout this project.

The benefits of our group having Octane Draincare, Octane Construction and Octane Holding Group proved invaluable.

In addition, everyone involved at Landmarc Support Services Ltd. Without the professional and positive business relationship we established, the project could not have run as positively as it did. Octane would also like to thank everyone at the APEA for this recognition and for hosting a great event.

Year after year, Octane Holding Group goes from strength to strength in providing a portfolio of infrastructure, construction, drainage, and refuelling services. And, with an eye for the future, we also offer vehicle charging and hydrogen solutions.

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Commercial fleets: Keeping the UK moving

For decades, diesel has been the default option for commercial vehicle fleets. But today, high-performance, environmentally friendly alternative energies are challenging the norm. TSG are assisting fleet operators in making the switch to greener energies.

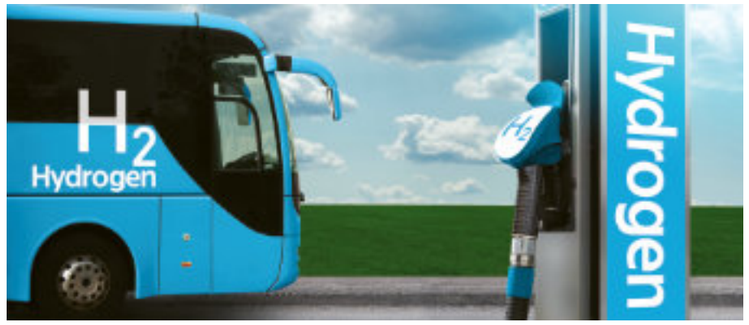
The commercial sector is at the very heart of British industry; transporting raw materials and end products between suppliers and distribution centres, large consumer outlets, factories, warehouses and even home deliveries.

Heavy and light goods vehicles (HGVs & LGVs) and vans are a familiar sight on UK motorways and busy main roads; delivering essential goods around the clock to businesses and homes across the country. Today's society is wholly reliant on the service that these diesel-guzzling workhorses provide, with circa 98% of all consumer products and machinery transported by road freight. So what will happen when the fossil fuel ban comes into effect?

Commercial fleet managers must be prepared for the energy transition, by revising their operating strategy and researching alternative energy sources to find the best fit for their business. Such a large-scale shift will undoubtedly be a very gradual process, So, in order to achieve the government's ambitious goal of net zero by 2050, the transition should effectively start now.

Time for change

In an industry of tight margins, fierce competition and stringent regulations, a high-investment move of this magnitude can seem overwhelming for fleet



operators. Replacing an entire fleet of commercial vehicles and supporting infrastructure is a considerable investment for any company, requiring a carefully structured approach to the procurement policy. However, early adoption of greener energies will deliver lower operating costs over the short, medium and long term.

Of course, careful consideration should be given to both vehicle selection and the energy to power them, to allow companies to meet the changing carbon targets and eventually sever the link with volatile oil prices.

The logistics sector is currently responsible for emitting circa 20 million metric tonnes of carbon dioxide (CO2) annually. Clearly, switching commercial fleets from diesel to greener alternatives would be a significant step toward the decarbonisation of British roads.

There are several new energy options on the table: hydrogen, compressed natural gas (CNG), liquified natural gas (LNG), electricity and a variety of bio-fuels (including bio-CNG and bio-LNG).

The benefits of going green

Switching to greener energies will clearly convey a logistics company's commitment to sustainability, and raise its profile in the community. Manufacturers and retailers are increasingly looking for an environmentally responsible logistics partner to help them meet their own sustainability targets. So a commercial fleet, powered by green gas or electricity, could give a transportation company the edge it needs when competing for new business contracts.

Natural gas engines are up to fifty percent quieter than their diesel counterparts, with electric commercial vehicles the quietest of them all. This enables vehicles to operate unnoticed in urban areas outside normal business hours, easing congestion and making fleet operations more flexible.

Typically, diesel fuel represents more than one-third of all costs for commercial fleets. Natural gas or electricity can offer significantly cheaper running costs, saving fleet operators up to 40% compared to diesel, depending on the daily duty cycle.

Finally, clean air zones are gradually being introduced in cities across the UK to improve air quality and reduce pollution. In London, this initiative is yet more severe with the development of an Ultra Low Emission Zone (ULEZ), which has now been extended to cover all of Greater London. The substantial tolls currently incurred by diesel-powered vehicles entering these designated areas will be completely eradicated when operators go green. Nor will electric or gas-powered commercial vehicles need to take lengthy detours to avoid these zones, saving time and energy costs.

Continued on p20

Continued from p19

Behind the scenes

The operations directors tasked with managing commercial fleets have to navigate many daily challenges, in order to get loads delivered safely and on time to the customers.

It is imperative that fleet controllers capitalise on the introduction of advanced fleet management tools, to ease the load and simplify processes, whilst ensuring operating efficiency and delivering cost reductions through data insight. Leveraging real-time, data-driven intelligence can result in spending cuts on maintenance, servicing and fuel.

TSG UK is here to help

TSG has been renowned for supplying equipment to the retail fuel industry for over 30 years, and will continue to support all fossil fuel sites for the foreseeable. However, TSG is now making a name for itself in the new energy sector, by supplying, installing and maintaining the necessary equipment to assist fleet operators in making the switch to greener energies. This includes all types of CNG and LNG plants and dispensers, and hydrogen compressors, electrolysers and dispensers.

TSG is now established as the UK's first-choice engineering, procurement and construction (EPC) contractor for all new energies (including electricity and solar), delivering all works within a predefined timescale and budget for any application.

Furthermore, TSG provides an unrivalled aftersales service to support its customers post installation. Operating seven days a week, TSG has a large team of highly skilled technical engineers and advisers on hand for every eventuality. It is clear that the key to successful energy transitions is for customers to have the utmost confidence in the reliability of the equipment and to trust that TSG is protecting their investment.

Finally, TSG supplies, installs and supports a superior depot management system, that makes controlling site equipment and energy dispensation straightforward and seamless.

Profleet LOGmaster – depot management made easy

LOGmaster®

As the world moves towards a more sustainable future, many commercial fleets have already started to shift to greener, cleaner energy sources. They need a depot management system that is able to make this important transition with them.

Profleet's LOGmaster, the successor to the DiaLOG fuel management system, facilitates smarter depot control for fleet managers, by providing a comprehensive, centralised overview of all of the equipment on site. LOGmaster improves operational efficiency and streamlines business processes, resulting in faster throughput of the fleet and increased productivity across the site.

LOGmaster connects to any make or model of equipment on site (regardless of brand), catering to traditional fossil fuels and new energies, including gas, hydrogen and electricity, paving the way for future development and growth.

Site operators can choose to store data on their own network or in the cloud (without storage fees) and change the connection at any time. If there is a network outage, LOGmaster's replication process ensures operations will continue across the remaining sites until the connection is restored, without incurring data loss.

LOGmaster's sleek terminal, with its advanced touchscreen display, allows for seamless and swift customer interaction. The contemporary design is very easy on the eye, and its compact nature means it will suit any scale of operation. Both the standalone model and the wall box are manufactured with an anti-corrosion coating on every panel to ensure its durability, even in the harshest conditions.

GasLOG

Control the dispensation of compressed natural gas (CNG), liquefied natural gas (LNG) or hydrogen in a reliable way, even when fuelling takes place overnight. Advanced settings such as quantities and low flow rate deactivation, allow stable and safe operations.

ChargeLOG

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FuelLOG centralises real-time data received from the storage tank, dispenser and automatic tank gauge (ATM) to enable fleet managers to track and control fuel and AdBlue usage. Operators are able to gain an understanding of their fuelling costs, by viewing a detailed breakdown of fuel stock consumption by driver, vehicle and site. The system is also able to highlight potential areas of concern, such as a sudden drop in fuel level and suspicious transactions. Being able to monitor fuel movement in this way can help managers achieve a higher level of efficiency and subsequently save costs.

For more information on LOGmaster, visit: https://www.tsg-solutions.com/uk/profleet-logmaster/

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Permanent decommissioning using foam injection

Ancorra Environmental were tasked with uplifting an amount of gas oil for disposal, and then the permanent decommissioning of the old underground fuel storage tanks.

In order to do this, Ancorra carried out a site survey to determine the most cost-effective solution; to benefit both our customer and the environment, due to the sensitivity of the location in central London. However, no location is too difficult for Ancorra.

The tank in question was a split compartment tank. With this particular project Ancorra faced, foam was the obvious answer; as the alternative concrete method would have been damaging to the partition wall inside the tank.

Waste uplifted

Our Ancorra team were mobilised and on site first thing, in order to lessen the impact on our customer's business. We uplifted waste from the tank using our ULEZ Fors compliant ADR Multipot Jet Vac Tanker. This was then taken for further disposal at a licensed disposal site.

Foam injection

Once our tanker works were complete, we then continued with our multipurpose foaming vehicle; in order to access the below ground car park, where the spilt compartment tank was located. We then disconnected and capped off the relevant pipework and continued with our foam injection process.

Once completed we left the site – leaving a very happy customer;

"Tony and the Ancorra team were great. I couldn't have asked for better from them. Efficient, friendly and nothing was too much. Great work guys!'

Central London, 2023.

Ancorra always strives to keep our customers happy with a smile on their face, and with minimal impact on their business. It's no wonder our customers trust us to complete works to the highest standard.

Tank removal: Survey, clean, degas, uplift, remove

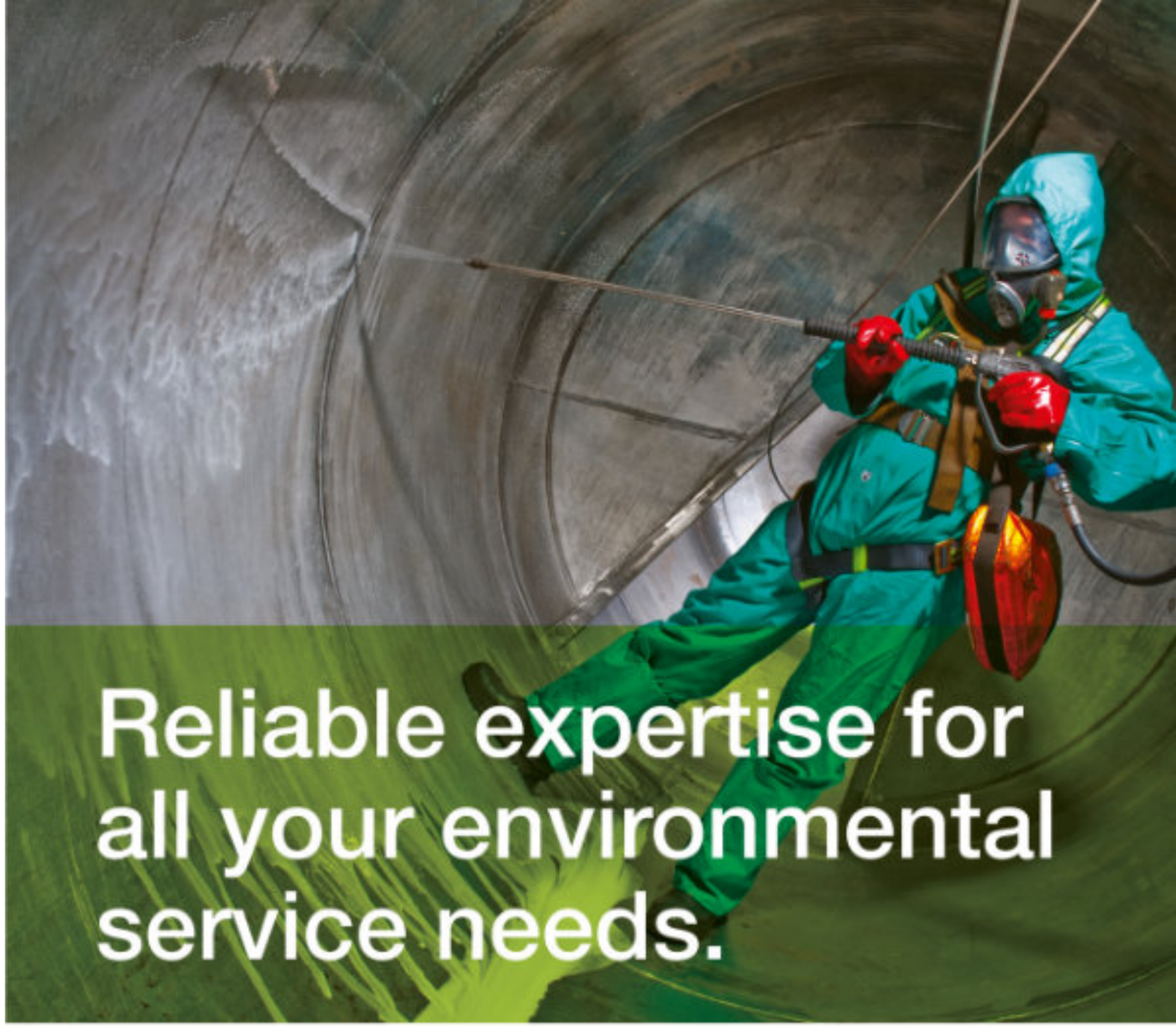
Ancorra were tasked with the removal of a fuel tank, due to our customer experiencing a high level of fuel theft. We were given the duty to decommission the existing fuel installation.

To carry out this process, we sent an engineer to site to complete a full, comprehensive survey. This enabled us to produce a scope of works for the customer's approval, with minimal impact to their site.

Our responsibility was to clean and degas a 60,000 litre above ground tank, and transport it into storage at the customer's request.

Our Artic Mulitpotter uplifted good fuel and transferred it to another site owned by the customer, to minimise fuel loss. We then continued to carry out our tank removal procedure.

www.ancorraenvironmental.co.uk



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Fuel site decommissioning owners / site operators

Having decided to decommission a site used for fuel storage, part of that process will involve an assessment of the existence of any contamination, and in the event that contamination is discovered, someone has to be responsible for pollution clean up.

The Environmental Protection Act 1990 (EPA) established the operation of the 'polluter pays' principle in the UK[1].

The EPA states, that the responsibility for cleaning up contaminated land falls in the first instance to the person who knowingly caused or allowed polluting substances onto or under the land[2].

Unfortunately it is not always clear when the pollution occurred, or there may be numerous parties who all could bear responsibility. Even if the responsible party can be identified, it could be impossible to trace them or they may not exist anymore.

So if no such party can be found, the responsibility for the clean-up passes onto the current owner or occupier of the land. Regardless of whether or not they caused, or were even aware of the pollution.

Even a tenant with a lease term over 21 years could be deemed to be the owner of a contaminated site, if their landlord becomes insolvent. The tenant could be liable for any costs associated with cleaning up the contamination, by virtue of a covenant in the lease to comply with all statutory requirements that arise during the term of the lease.

So the discovery of pollution probably means contacting your Public Liability insurers to start the claims process.

However, from an insurance perspective, insurer's definition of 'pollution' might not match your own.

Contractors

Construction activities, especially on brownfield sites, have significant potential to cause adverse environmental impacts through pollution and/or release of existing contamination.

Examples of typical causes are:

- Handling and storage of fuels, solvents and other harmful substances at work sites
- Impact on controlled waters by surface water run-off into watercourses and soaking of pollutants into groundwater
- Creation of migration pathways for existing contamination by piling or excavating through impermeable ground
- Mobilisation of existing contamination by dewatering
- Disturbance of asbestos or lead paint through demolition/ renovation activities
- Creation of noxious odour or dust by site works migrating offsite and impacting adjacent properties

This could result in responsible parties facing liabilities as a result of:

- Third party claims for bodily injury, property damage, loss of use of assets/ business interruption, common law nuisance etc. (tort liability)

- Regulatory actions to clean up the pollution/contamination and/or abate the resulting statutory/public nuisance (statutory liability)
- Obligations to prevent and remediate serious environmental damage and to restore the environment (especially biodiversity/ natural resources) to its pre-damaged state (environmental damage liability).

Whilst tort liability usually requires fault and/or foreseeability on the part of the polluter, statutory liability (including environmental damage liability) is mainly strict.

The main responsible party will usually be the contractor (as "the polluter") but developers and site owners/employers can also potentially face liabilities where construction activities cause environmental impacts – especially if the contractor is no longer in existence when the liabilities arise.

Purchasers

Knowing and permitting pollution that you didn't cause

Classification as a "knowing permitter" – the party that assumes legal liability even though they or their organisation didn't cause the pollution – requires knowledge of the contamination, the power and opportunity to do something about it and the failure to act.

This means that it is possible for a buyer of a contaminated site to be deemed a 'knowing permitter' of contamination; if it undertakes environmental investigations on the site that reveal a significant possibility of harm or water pollution and it fails to take preventative action.

In the event that contamination is discovered during the buyer's due diligence process, they should ensure that arrangements are made with the seller to apportion or deal with any future clean-up costs, and that their liability is limited as far as possible.

And it's not just the environmental issues they need to consider; organisations could suffer irreparable damage to their reputation through adverse publicity too.

When is pollution not pollution?

Following the enactment of The Environmental Protection Act in 1990, the Association of British Insurers puts a standard exclusion in place for pollution liabilities in public liability policies, but cover is often written back as long as the pollution causes damage to third party property or injury to third parties and is:

• Sudden • Accidental • Unforeseeable/Unexpected

The pollution event also needs to take place at a defined place and time.

Pollution and General Public Liability Policy Coverage

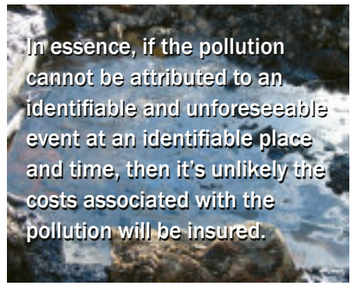
	Gradual or historic pollution	Environmental damage - biodiversity & natural resources restoration	Statutory pollution liabilities	Own site remediation costs
Covered	No	No	Limited	No

And even if the pollution happens at a defined time and place, if you've not adequately maintained the equipment – whether it's the tank, pipework, interceptors, bunds etc. - then it could hardly be considered unforeseeable, could it?

Leaking Pipe

10 drips a minute = 600l in 6 months!!

And even if the pollution happens at a defined time and place, if you've not adequately maintained the equipment – whether it's the tank, pipework, interceptors, bunds etc. - then it could hardly be considered unforeseeable, could it?



What can you do?

For owners, aside from the obvious sound operational risk management (including suitable protections and regular maintenance of storage systems, bunding and interceptors), monitoring storage volumes closely can help identify any lack of system integrity that might lead to an uninsured claim.

For contractors, being aware of the potential mobilisation of existing contamination and run off whilst being on site, especially if you're the principal contractor.

There are insurance policies available that include own site clean-up costs and mitigation costs, such as the Petrochemical policy available through Pen Underwriting. This policy includes access to a 24/7 spill response helpline and crisis management specialists to help manage any adverse publicity and demonstrate you've done all you can.

Specific Environmental Impairment Liability insurance can cover gradually occurring pollution, or liabilities arising from historic activities on sites you own or occupy.

Directors and senior employees of limited companies are not immune from prosecution following a pollution event either. Most Directors' & Officers' Liability policies now exclude claims relating to pollution. However, some policies will include indemnity for defence costs relating to legal action arising from pollution, such as the Pen Underwriting policy OAMPS Hazardous Industries can provide.

Unfortunately, pollution incidents can and do happen on even the most well managed sites and it is often not until such an incident occurs that businesses come to realise that many of the ensuing costs and losses they incur are not insured.

Speak with your insurance broker to discuss the solutions that would appropriately suit the risks your business is facing.

Disclaimer

The sole purpose of this article is to provide guidance on the issues covered. This article is not intended to give legal advice, and, accordingly, it should not be relied upon. It should not be regarded as a comprehensive statement of the law and/or market practice in this area. We make no claims as to the completeness or accuracy of the information contained herein or in the links which were live at the date of publication. You should not act upon (or should refrain from acting upon) information in this publication without first seeking specific legal and/or specialist advice. Pen Underwriting Limited nor OAMPS Hazardous Industries, part of Pen Underwriting Limited, accepts no liability for any inaccuracy, omission or mistake in this publication, nor will we be responsible for any loss which may be suffered as a result of any person relying on the information contained herein.

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[1] https://www.legislation.gov.uk/ukpga/1990/43/contents • [2] https://www.legislation.gov.uk/ukpga/1990/43/contents

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Electric vehicles vs hydrocarbon vehicles: Safety myths explained

Graeme Warnell, Director of EV-EXBOX, is an expert in EV charging risk assessment. Here he weighs up the comparable fire risks attached to both EV and ICE vehicles, and their infrastructure.

If you have flicked through any social media recently you cannot have failed to see the concerns surrounding lithium-ion batteries and electric vehicles.

In the instances of fires caused by e-bikes, e-scooters and disposable vapes, the concerns regarding lithium-ion battery safety are well founded. There is not a day that seems to go past without a fire; resulting in severe damage to property, personal injury or tragically death.

For e-bike and e- scooters the guidance is clear: do not leave them to charge unsupervised, do not charge overnight and if possible do not charge indoors. If there is no alternative to indoor charging, ensure the equipment being charged is not blocking a safe exit route.

However, for electric vehicles the situation is more complicated, and the available data is harder to accurately assess and analyse. As a result of this, society seems to have polarised itself into taking extreme views reading the safety of EV and ICE's. The extreme pro EV camp believes an EV can do no wrong and the EV poses no risks when compared to and ICE vehicle. The extreme anti EV camp believe lithium-ion battery vehicles are mobile time bombs - waiting to explode at any minute.

For the purpose of this article, I would like to focus on the sensible "middle ground" on which we should base any risk assessments, and also to dispel some of the common myths regarding both EV's and ICE vehicles; as both for and against camps try to play one vehicle type off against the other.

ALL CARS BURN MORE FIERCELY

When we look at the nature of ALL vehicle fires, we have to understand that in the last 20 years car design, and the materials used for car construction, have changed significantly; regardless of whether they are EV's or ICE's. ALL vehicles now contain far more electrics and volatile organic materials than ever before.

The use of these materials means that ALL cars will burn more fiercely than they ever did before in the event of a fire. The intensity of a modern-day car fire ensures that any fire will spread more quickly from vehicle to vehicle. The use of more volatile organic materials will also mean that a modern car will give off more toxic fumes and result in the creation of more highly polluted fire water run-off.

These facts are confirmed from feedback from firefighters and first responders tackling car fires globally.

All modern cars now take longer to extinguish and require more water than they ever did before.

At EV-EXBOX we look at the typical risks associated with both EV and ICE vehicles, and we find that in many respects they are pretty similar.

A petrol car has the inherent risk of fire, a release of explosive fuel vapour, emitting toxic fumes and creating a serious pollution event.

Likewise, an EV car can catch on fire due to thermal runway, emit explosive and flammable vapour, emit toxic fumes and result in a pollution event.

With this in mind we struggle to understand why the design of EV charger locations are not as onerous or well defined as those for petrol filling stations when the risks attributed to both EV's, and ICE's is comparable.

Continued on GP2

Continued from GP1

MYTH 1 : EV'S CATCH FIRE LESS THAN ICE'S

To begin with, we need to understand that the frequency of EV fires compared to ICE fires is very difficult to factually record with any degree of accuracy on a global basis.

To date I have seen a figure published that states:

"You are 24 times more likely to been involved in an ICE fire than an EV fire."

or, 0.3% for EV cars caught fire globally compared to 1.05% for ICE cars.

The problem we face as an industry going through a huge transition, is that we still do not have enough data to make a true statistical comparison that is meaningful to identify the differences between the fire frequency of EV's and ICE's.

The challenge with the current data is the huge imbalance in the numbers of EV's vs ICE's. Just reporting the numbers is not enough, as for a true analysis we must consider vehicle age profiles vehicle type, vehicle use, vehicle power, vehicle mileage, vehicle usage, frequency of servicing, previous crash history etc; with regards to both sets of vehicles in the data set.

Thankfully, there is some great work currently being undertaken by EV Fire Safe in Australia and the NIPV, Dutch Institute for Safety and with time, (probably at least another 10 years), we could have enough data to compare EV fire frequency with ICE vehicle fire frequencies, using truly comparable data sets.

However, maybe we should even challenge the relevance of the EV vs. ICE comparison, especially when new ICE vehicle manufacture stops 2030-5. At some point we will reach a tipping point in the balance between EV's and ICE vehicles and in another 20 years, we may only have EV fires to worry about.

As we clearly understand the fire risks of ICE cars surely it is better to just focus our attention to EV and hybrid data to assess where, when, and how they catch fire. If you believe the current data that EV's catch fire less, then let's understand why they burn at all and, try to eliminate this through design of both vehicles and charging infrastructure. If we can do this, we achieved something meaningful through the data analysis for the future safety of EV's.

Myth verdict: Stop comparing EV and ICE fire frequency it will be an ever-moving target.

What is inevitable with any mechanical device, is the risks of failure resulting in fire increases with usage and time. If we add to this our demand for more powerful batteries and faster charging, the problem will grow; but hopefully be balanced by some advances in battery technology. As we move to battery storage systems in charging poles, we must now also to consider not just the EV's but also the charging infrastructure supporting them.

MYTH 2: EV FIRES ARE MORE DIFFICULT TO EXTINGUISH THAN ICE FIRES

With the true unknown probability of an EV or ICE fire set to one side, we should perhaps focus on what happens when we do have a vehicle fire, (already knowing that all car fires are harder to deal with than they were 20 years ago). For ICE cars the emergency services have had over 100 years of practice in extinguishing fires, so the risks are known, the training is in place and the equipment carried is fit for purpose.

For EV's there is more of a challenge, as the emergency services and the entire fire industry is still innovating to try and make lithium-ion battery fire suppression in vehicles more effective. The biggest challenge still sits with the car design itself, where the battery packs are very inaccessible. The secondary challenge is that the exothermic reaction that is," thermal runaway," does not behave like a traditional ICE fire.

A lithium-ion battery in thermal runaway emits highly flammable and explosive gas. When the gas ignites, there can be a vapour cloud explosion or the violent burning off of the electrolyte gas as it is released from the battery pack. But is that not the same as petrol vapour which can explode or burn as well?

In some ways the answer is YES, however, with a petrol fire once you starve the fire of oxygen or remove the vapour you have effectively controlled the fire. With a lithium-ion battery fire starving the fire of oxygen can be challenging as the battery creates its own oxygen during thermal runaway.

What you may do during an EV fire is extinguish the flames that were the result of all the burning volatile organic materials, plastics, rubber etc; but the thermal runaway in the battery will continue. As long as the thermal runaway continues, the battery will continue to emit flammable and explosive gas. So we enter the cycle of EV fire re-ignition, which can persist for days.

Myth verdict: Yes, EV presents a bigger challenge to firefighters than an ICE vehicle due to the nature of a lithium-ion battery fire.

Aside of the battery the burn characteristics of an EV and ICE are pretty much the same.

MYTH 3: AN EV FIRE CREATES A BIGGER ENVIRONMENTAL INCIDENT THAN AN ICE FIRE

What you will often hear regarding an EV fire was the fact that tens of thousands of litres of water had to be used. This is often the case, and sometimes the EV can end up in a total submersion container. When we look at the volumes of water used, we should ask ourselves how much of this water was used effectively?

All cars will create highly toxic fire water pollution. An EV vehicle fire will, however, release more pollutants if we use more water and if the battery pack splits and is flushed as part of the firefighting process.

When we look at innovation, the key to controlling an EV fire is around cooling the battery, as this slows down and eventually stops thermal runaway. Simply turning a fire hose onto the battery and using water alone may not be the best use of such a large volume of water.

New equipment on the market allows the battery to be punctured or cut into, allowing the battery compartment to be flooded with water. The difficulties with this arise with locating the best place to create a successful battery penetration. We have to consider all the various differences between the makes and models of EV's. In terms of personal safety directly trying to access the battery pack puts the emergency services closer to the burning vehicle. If battery penetration can be successfully achieved then less water will be used. However, as we mentioned before, if the battery pack is flushed then this will result in the highest release of toxins into the firewater.

Having reviewed a number of high-profile ship fires recently, (and let's not debate if it was EV or ICE until the investigations are completed), it seems innovation is now looking at water misting as a more effective cooling solution than water drenching. Water misting, using an added encapsulation agent to promote rapid cooling, may take us even a step further in the effective suppression of a thermal runaway event - using less water.

Myth verdict: all modern cars create more toxic firewater and smoke than they ever did before.

This has been overlooked in terms of pollution control mechanisms, where any cars park or are charged. The EV has the potential to release more heavy metals and PFA chemicals if the battery pack is flushed. The use of excessive amounts of water used to combat EV fires will make the EV firewater run off harder to contain.

MYTH 4: THERE ARE FIRE EXTINGUISHERS FOR LITHIUM-ION BATTERY FIRES

What to do for an EV fire?

When we consider risk assessment, we cannot ignore the behaviours of our customers and how they interact with our safety systems. For a petrol spill they may grab a sand bucket and happily throw its contents over a spill. In a fire they might grab a fire extinguisher as they are typically located next to the pumps, and we are happy for them to do that. So, what does a customer or site operator do in the event of an EV fire?

On the marketplace today there is an array of fire extinguishers that profess to be suitable for lithium-ion batteries, but not all of them. A typical fire extinguisher may contain between 9 – 50 litres of firefighting medium. This may be enough for laptops, phones, e-bikes, or mobility scooters but it will have no effect on an EV battery fire. There is simply not enough medium to cool the battery and probably not enough to extinguish all the organic materials once they are fully alight. It is important to remember a lot of EV charging is unmanned and unsupervised, so a fire may be well established before any alarm is raised and action taken.

Myth verdict: There is no fire extinguisher suitable for an EV battery fire.

The desire of an EV driver to save his own vehicle should not be encouraged through the use of fire extinguishers. Leave it to the professionals!

Continued on GP4

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Continued from GP3

MYTH 5: A FIRE BLANKET WILL PUT OUT AN EV FIRE

If we look at fire blankets, then the application of these is really a job for between 2-4 people, not an individual.

Once of the key challenges in deploying a blanket is that you need to get close to the vehicle. The EV can jet out flames from the battery pack up to 2-3 metres, and if it's a hybrid or petrol car there is the risk of explosion from the petrol tank.

If a fire blanket is successfully deployed, it can extinguish the flames associated with the organic material components of the car through oxygen starvation. However, as discussed before, the battery can generate its own oxygen, and if not cooled it will continue to emit highly flammable electrolyte gas.

To smother a fire, the fire blanket must be impermeable. Therefore you also run the risk of allowing the explosive electrolyte gas and toxins, such as hydrogen cyanide and hydrogen fluoride, to build up under the blanket.

Myth verdict: Blankets make us nervous

At EV-EXBOX we have seen fire blankets deployed at EV charging hubs and in car show rooms, which makes us very nervous.

What we know about EV fires, is that they should only be tackled by the emergency services, who will be fully trained and wearing breathing apparatus and fire-retardant clothing. The desire of an EV driver to save his own vehicle should not be encouraged through the use of fire blankets. Leave it to the professional!

MYTH 6: EV'S ARE HEAVIER THAN ICE'S. THIS IS A PROBLEM FOR THE FUTURE

For now, let's forget the EV vs ICE debate and just focus on cars in general. All cars are getting heavier for two main reasons. First, people want a much higher equipment specification, more luxurious seating and bigger interiors for more space and comfort. There is also the perception that bigger is safer although ironically heavier means harder to stop and slower to escape from in a potential accident scenario.

The rise of the SUV, and uptake of 4x4's in urban areas, means average car weights have been increasing for some time; with or without the uptake of EV's.

Yes an EV battery can weigh over 500kgs, but most EV's are weight comparable to most small non-EV SUV's. The real weight factor only really comes into play when you put massive batteries into massive cars; which tends to be at the more luxurious end of the car market and typically less common.

Myth verdict: Our obsession with owning bigger vehicles in general is the issue.

Heavier cars could pose a problem for some very old structures as time goes on, but this is not uniquely an EV issue. If we think there is unfair wear and tear on roads then use weight as a taxation metric. Let's face it, the vehicle taxation metrics have changed at least twice in my lifetime, which means they are not fixed.

CONCLUSION

In a world where we are still struggling to understand the long terms risks of EV's, we must firstly acknowledge the fact that EV's and modern ICE's have brought new challenges to public, fire and environmental safety management and risk assessment. Much of our infrastructure today has not taken into account how these risks have changed over the last 20 years.

If we look at a petrol filling station with EV charging, the risk profile is still really focused on the hydrocarbons and not the EV facility. If we look at an EV-only charging facility, the design typically ignores all of the common risks shared by both EV's and ICE's: namely fire, risk of explosion and an increased toxicity of firewater run-off.

In this article we have covered some of the most common challenges, but the list goes on and gets infinitely more complicated in locations such as below ground and multi-story carparks.

Additional considerations must also be given to public safety as EV chargers are now located in areas where there can be a high concentration of people, such as shopping centre carparks.
As EV charging is pushed to the boundaries of petrol filling stations, then boundary risk assessments should consider the risk of adjacent material flammability, such as cladding and the risk of fire spreading through wooden fencing or landscaped areas.

Having watched the electric vehicle and clean energy transition for many years, EV-EXBOX have devised a range of sensible and cost-effective risk assessment services, fire suppression and firewater pollution control measures to mitigate risk across a wide range of premises.

We are all on a learning curve when it comes to understanding the risks differences between ICE's and EV's, as the clean energy transition gathers pace. Do not be afraid of the risks but equally do not be complacent or ignore the risks. Our industry has been at the forefront of designing-out risks and it all starts with sensible risk assessment.
If safety itself starts with a conversation please reach out to the EV-EXBOX Team to discuss how we can help you to mitigate the risks of fire, public safety and environmental pollution for the future.

Email: info@ev-exbox.com • www.ev-exbox.com

Government announces £200m investment in zero emission trucks

HGVs contribute around 20% of UK domestic transport emissions and are acknowledged as a particularly challenging sector to decarbonise.

The Government has announced details of £200m funding for projects focused on freight decarbonisation. Four collaborative projects are to be funded involving 370 zero emission HGVs and associated infrastructure across Great Britain.

Delivered in partnership with Innovate UK, the £200m Government investment will also deliver around 57 refuelling and electric charging sites, providing vital infrastructure to help the haulage sector decarbonise.

Decarbonisation Minister, Jesse Norman, said:

"We're investing £200m to roll out 370 zero emission trucks, and a further £2.4m to pioneer green tech through the Freight Innovation Fund."

The four projects to be funded under the zero emission HGV and infrastructure demonstrator programme are:

GRIDSERVE

Will use their Project Electric Freightway to demonstrate up to 140 battery electric HGVs, that will be provided by DAF and Volvo, alongside up to 220 chargers, 70% of which will be open-access.

PROJECT ZERO EMISSION NORTH FREIGHT

Will demonstrate up to 70 battery electric and 30 hydrogen fuel HGVs. Eddie Stobart and Royal Mail are just two of the operators participating in this scheme.

VOLTEMPO,

Whose FREIGHT 2030 project will demonstrate up to 100 battery electric HGVs in partnership with Renault Trucks, Scania and DAF. Marks and Spencer and Menzies Distribution are some of the operators confirmed to be participating.

HYDROGEN AGGREGATED LOGISTICS (HYHAUL)

Led by Protium, which will deploy around 30 hydrogen fuel cell HGVs onto the M4. Through DfT funding, the HGV fleet will be serviced by one fixed hydrogen refuelling station (HRS) and mobile refuelling in two other locations. The project has longer term ambitions to implement two additional permanent hydrogen refuelling stations in Magor and Bridgend, alongside additional hydrogen conversion projects along the M4.

Commenting on the announcement, Zemo Partnership's Chief Executive Andy Eastlake said:

"This is the biggest investment in zero emissions ever seen for the crucial, tough to decarbonise, road freight sector.

"The zero emission HGV and infrastructure demonstrator programme puts over 300 battery electric HGVs, 60 hydrogen fuel cell HGVs and a network of 57 recharging and refuelling sites needed to operate them, into service with a wide range of commercial operators.

"Up to now, decarbonising HGVs has really only been possible through the use of low carbon renewable fuels like biodiesel or biomethane, but, as in every other area of road transport, the UK is determined to phase out the sales of new non-zero emission heavy vehicles by 2040.

"Like previous road freight demonstration programmes (LCTT and LEFT), these wide ranging projects will be closely and independently monitored with regular dissemination of progress and results, in this case led by a team from Ricardo UK.

"Zemo Partnership has been pleased to support the DfT and Innovate UK in developing the programme from its earliest conception and will continue to contribute to it via several targeted groups. Zemo's Commercial Vehicle Working Group will be keeping abreast of all the developments in this exciting, long-term demonstration trial."

www.zemo.org.uk

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Which is the right future fuel for you?

Dover Fueling Solutions take a look at the alternatives

Despite the move towards decarbonisation, internal combustion engine (ICE) vehicles are still prevalent in most markets. Up to 2020, nearly 80% of all passenger vehicles sold in the leading european markets were petrol or diesel, with the average lifespan of road vehicles being 10 years.

Clearly, the road to carbon-neutrality is a rocky one with barriers to adoption including price, range and refueling/charging anxieties. However, news that UK electric vehicles sales outpaced ICE sales for the first time in December 2022 offers cause for optimism in the race for adoption.

As motorists continue to embrace greener transport, many drivers will be considering which clean fuel is best for them. For fleet managers and sustainability directors, many will be wondering which is best for business?

At present, market leaders appear to be hydrogen, electric, Compressed Natural Gas (CNG) and Liquefied Natural Gas (LNG) – each with their own advantages. But which is right for you, your business sector or personal driving habits?

WHAT YOUR FUEL OF THE FUTURE MAY LOOK LIKE

We drill down into the data and review what your fuel of the future might look like.

HYDROGEN

Hydrogen would appear to be a strong choice for long-haul, heavy-duty vehicles and other commercial transport and we are starting to see the first fuel cell trucks recently appearing on the European market.

The Hydrogen truck lends itself naturally to the mass mileage demands of HGV haulage. Hyundai's current Xcient model, for instance, can travel 400 miles on a single tank, while Volvo is pouring millions into the development of its own hydrogen-powered alternative with a range of 1000 km.

Volvo's simple nozzle-to-pump dispensation will also appeal to motorists, with no need for time-consuming charging which may complicate electric, battery-powered alternatives.

To fully flourish, however, greater infrastructure is needed to support future fuel development. Hydrogen investment is growing but not as quickly as that of electric vehicles. Market leaders, Germany provide a neat case study with total German hydrogen refuelling stations expected to reach 85 by 2025 and 300 by 2030. Despite this, cumulative hydrogen investment totals €40 billion, which lags behind EV at €51 billion.

One other thing to note, when it comes to this future fuel is cost. In Germany, the average price of fuel per 100km is 7.60 euros for Hydrogen, compared with 9.05 euros diesel and 11.74 euros for petrol.

COMPRESSED NATURAL GAS

One lesser known option is CNG which is widely accepted to be the 'cleanest fossil fuel'. Its chemical properties mean it's compressed to less than 1% of its volume while it reduces carbon monoxide emissions by 90 to 97 percent.

Although it's a non-renewable source, having been formed millions of years ago from decomposing plants and animals, CNG is non-toxic and has fiscal benefits too. Every 1% increase in natural gas production can create 35,000 jobs.

Statistically, CNG is 30% more efficient than petrol, with a vehicle able to travel the same distance on 6/7 litres of CNG as 10 litres of petrol. As with any fuel, pricing is subject to global market conditions, but it remains the cheapest non-renewable energy source. Its nozzle-to-pump refuelling method is also a clear user benefit.

Despite this, CNG adoption is currently in its infancy. There are currently only 4,159 refilling stations across Europe, which makes it more of an option for fleet owners as opposed to the everyday motorist.

This is not to say that CNG doesn't have mainstream potential, with the fuelling option accepted in Europe for passenger vehicles. Almost any petrol vehicle can be retrofitted with a CNG system for around €3000 - €5000, which could make it a shrewd alternative to other clean fuels. This may appeal to businesses or commercial fleets that require its efficiency benefits.

In Germany (CNG market leaders) the fuel compares favourably in terms of price too. The average cost of fuel is 6.48 euros per 100km for CNG, compared to 9.05 euros for diesel and 11.74 euros, petrol.

LIQUEFIED NATURAL GAS

LNG is another derivative of the abundant natural gas, formed when natural gas is compressed and cooled to -162 degrees Celsius. The International Energy Agency estimates that if consumption remains at present levels, there are enough resources to last 230 years.

Again, much like its counterpart CNG, LNG is a cleaner fossil fuel, producing 40% less carbon dioxide than coal and 30% less than oil. It's clean and quiet burning, while its familiar refilling method should appeal to drivers.

LNG infrastructure may be embryonic, but it is fast growing. There are around 635 LNG stations on the continent, with the bulk concentrated in Western Europe: Germany with 162, Italy with 130 and Spain with 90, This represents a network that has doubled in size in less than two years.

Ultimately, consumers want energy to be affordable, secure and capable of driving down carbon emissions. LNG ticks all these boxes.

Its cost-competitive benefits mean it has strong potential for commercial transport.

ELECTRIC VEHICLES

While the hydrogen propulsion method first gained traction in the early 2000s, this has been supplanted in recent years by the rise of EVs.

The European market is currently leading the charge on the global stage with 1,390,000 units sold across the continent per year. By 2030, every second car sold is expected to be powered by electricity.

This has serious potential for the general motorist. Massive investments are being made across EMEA as countries pour billions into charging infrastructure. The Netherlands is currently blazing the trail with 90,000 charging points as of 2022, while Europe plans to have 1.3 million public chargers in place by 2025 and 2.9 million by 2030.

Price points also offer mainstream charging potential. In the Netherlands, the average cost of electricity per 100km is 5.31 euros compared to 8.66 euros for diesel and 12.32 euros, petrol. Home and workplace charging stations, meanwhile, remain safe and easy to use where drivers can simply 'plug in' their vehicle to the charge point.

Despite this, charging times, range anxieties and initial cost remain main barriers to adoption. David Mc Guinness, Director of Product Management, Electric Vehicle Charging at Dover Fueling Solutions expands on reasons for this:

"While price and range concerns are being addressed by automotive manufacturers, more needs to be done by authorities to improve access to 'the plug'. Dependable, renewable energy infrastructure is required to feed the grid with a need to create a consumer-centric recharging model that serves the practical needs of EV drivers.

"As local governments begin to embrace this, companies can deliver high-quality fast chargers to market."

CONCLUSION

As the world, and the transport industry, move towards Net-Zero, it's likely all four options will be an integral part of the decarbonisation mix, each with their own distinct benefits.

In fact, each offers something unique, so you should take time to explore your options and make a well-informed decision on which of these future fuel alternatives will suit your business goals and lifestyle the best.

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Shell Recharge Solutions and Aldi partner to provide more public charge points for electric vehicles

Partnership to provide Aldi UK with charge points for their customers to charge up their electric vehicles (EVs) whilst shopping.

3 year deal will add approximately 140 new chargers to the UK's public charging network.

Shell Recharge Solutions, a leading European smart charging solutions provider, will partner with the UK's fifth largest supermarket, Aldi, to provide electric vehicle (EV) charging points at all new Aldi store locations across the UK, allowing customers to charge up their EVs whilst shopping. This will add 140 chargers to the UK public network, with the potential of more to follow to match rising customer demand. Aldi will also install charge points at its headquarters in Atherstone to encourage and support the uptake of sustainable driving.

The Shell Recharge Solutions charge points will support charging speeds of up 22 kW, significantly higher than the 7kW chargers generally available. This will ensure Aldi's EV infrastructure is future-proofed to accommodate newer EV models that will have bigger battery sizes and support greater charging speeds.

Alan McCleave, UK General Manager of Shell Recharge Solutions, said: *"We are excited to be partnering with one of the UK's fastest growing supermarkets. We are scaling up our offering in the UK to make EV charging easy and accessible for a growing number of drivers. Now is the perfect time for retailers and commercial businesses to invest in their charging infrastructure."*

Fritz Walleczek, Managing Director of Corporate Responsibility at Aldi UK, said: *"Sustainability and protecting the environment is extremely important to us and our customers. We are delighted to be working with Shell Recharge Solutions to offer shoppers access to fast, easy charging facilities when they visit our stores, and to further support our colleagues to make more environmentally-friendly choices."*

EVerse™
Smart cloud software suite for EV charging management
EV Charger Management Portal | EV Driver App | Built for the Petroleum Retailer
Mobilise and monetise your EV charging network with the only end-to-end e-Mobility Platform designed for the unique business needs of fuel retailers.
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Revolutionising the fuel pipework industry:

SMARTFLEX™ 200mm by Nupi

In the ever-evolving world of industrial technology, innovation is the driving force behind progress. Nupi Industrie Italiane S.p.A., has once again pushed the boundaries of possibility by introducing the industry's largest High-Density Polyethylene (HDPE) fuel pipework. This breakthrough not only showcases Nupi's commitment to customer needs but also sets new standards for the fuel pipework sector.

The demand for large-diameter fuel pipework with a minimum internal diameter of 162.3mm became evident when a special oil gantry site required a staggering 2000 litres per minute. Traditional steel pipework seemed to be the only solution, albeit an expensive one, prone to corrosion and abrasion, and lacking longevity. It was in this scenario that a customer approached Nupi with a unique challenge.

Handling a unique challenge

The answer to this challenge was the birth of:

SMARTFLEX 200mm fuel pipework, along with a full range of fittings.

Since its establishment in 1972, Nupi has continually strived to grow alongside its customers' needs and lead the industry in product innovation, best practices, and standards.

Nupi's portfolio extends beyond fuel pipework, encompassing over 20 brands in various industries, including water, gas, heating, and air conditioning. SMARTFLEX, introduced in 1996, was specifically designed to cater to the needs of downstream industry pipework. It has since been installed in almost 150 countries worldwide, by certified installers working with both global and national oil companies.

The typical sizes of pipework at service stations ranged from 32mm (1") to 110mm (4") in single wall and 32/40mm - 110/125mm in double wall. In collaboration with project engineers, Nupi expanded its range over a decade ago, adding 160mm single wall pipework and double 160/225mm pipework.

Larger pipework needed

However, the need for even larger pipework; 200mm single wall (200/250mm double wall) emerged as applications for HDPE fuel pipe expanded into environments where significant fuel volumes were required.

Nupi's 6" (160/225mm) double wall pipework found a home in prestigious marinas, airports, and heliports, filling mega yachts and more. But when a customer demanded even larger pipework to deliver a speed of 2000 litres per minute for a bottom loading skid,

Nupi was ready to meet the challenge. Extensive underground tanks were installed to supply fuel to the skid, and a specialist engineering company calculated the necessary pipe diameter based on various factors.

The result was a fuel pipework with a 200mm outside diameter and an internal diameter of 168.2mm – a perfect solution. The longer 11.6m lengths reduced the number of fittings and installation time, further enhancing the appeal of SMARTFLEX. As with other SMARTFLEX sizes, a complete range of fittings was developed, all working on a barcode system to reduce installation time and human error, and boasting a 30-year warranty.

The impact of SMARTFLEX 200mm pipework on the project was profound, saving a substantial amount compared to traditional steel pipework. It also had a positive environmental impact, with a 30-year warranty and a 50-year design life, significantly outlasting steel alternatives. Moreover, it streamlined the installation process, saving both time and costs.

We adapt and innovate

Nupi's ability to adapt and innovate is a testament to its commitment to the industry and its customers. This remarkable journey was made possible through collaborative efforts with various departments, including: Quality, Technical, R&D, Testing, and Commercial, along with the invaluable partnership of installers Falcon Fuel, plus Taggart Design, project engineers.

As Nupi continues to push the boundaries of what is possible in the industry, it eagerly looks forward to collaborating on more special projects, and offering innovative solutions that will redefine the sector. SMARTFLEX 200mm is not just a breakthrough; it's a testament to Nupi's unwavering commitment to excellence and innovation. With a 30-year warranty, this is more than just pipework; it's the future of fuel delivery.

SMARTFLEX is available from multiple locations worldwide, including The UK warehouse in the Midlands, offering same day collections or next day deliveries in most cases.

To find out more contact:

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Nupi Industrie Italiane S.p.A.,

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www.nupiindustrieitaliane.com

Unique services from Berrys

Birmingham based Berrys Technologies, added a number of unique projects to their portfolio throughout 2023.

Once known as the 'City of a thousand trades' Birmingham is familiar to hosting those who specialise in steel and fabrication. This is an area of expertise Berrys have provided the retail and forecourt industry since the early sixties; paying homage to the city's long-standing tradition. Boasting a 5,000 square foot machinery and fabrication centre, alongside an experienced team of CAD and CAM professionals, there is no limitation to the service Berrys provide.

It all starts with an idea

This is often proposed by the customer, then demonstrated in a series of 3D models and technical drawings to scope the feasibility of the project. Once given the go ahead, the manufacturing process begins to take shape. What starts as a piece of sheet metal, gradually forms itself into part of the well-recognised ATLAS range; consisting of under pump sumps, tank chambers and fill positions. All these are designed and manufactured within Berrys' premises.

Tasked with designing a system to fill above ground tanks from standard gravity delivery tankers, in conjunction with Ledbury Welding's 'VEHESTA', the Berrys pump filling station had to consider a variety of outcomes:

What would happen if a pump was out of action? Or if a pump failed during delivery?

With its unique manifold and drain down system, along with flow switches and non-return valves, the brief was able to be achieved.

Berrys have now supplied to 14 Tesco PFS sites across the country. Arriving onsite fully assembled and tested, ready for immediate install. All that's required is the final touch of pipework connection to the tank, made easy with PLX electrofusion.

Bespoke pump stools were also designed for several pump models. With a unique housing to accommodate anti-syphon valves and single sided pumps, the latest version has been manufactured with a retractable base to allow access to the pump from both sides, due to restricted space near the pump stand.

Below ground water contamination

Fluid containment didn't end at under pump solutions either. Frog Environmental; specialists in below ground water contamination and silt disposal, approached Berrys for a partnership, to penetrate the retail fuel market.

Car wash silt and isolation traps are common pieces of technology used to contain water waste, so Berrys were able to accommodate the system using a fabricated steel chamber and 200mm diameter PLX pipework.

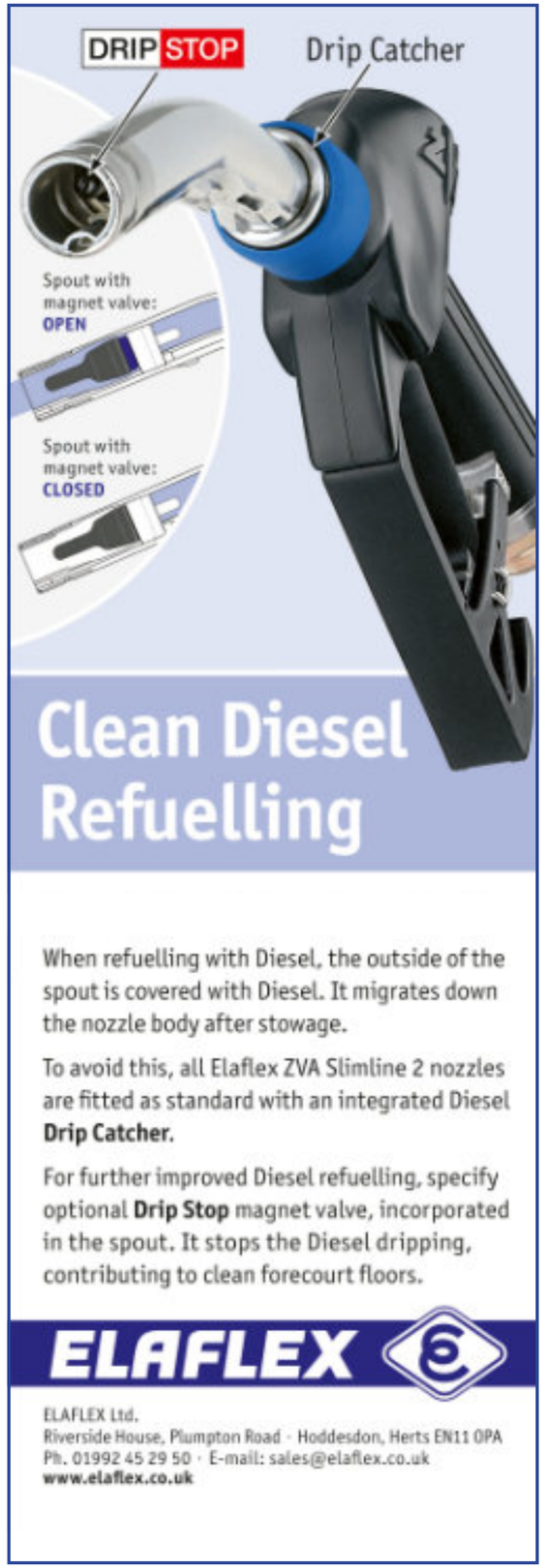
Success Stateside

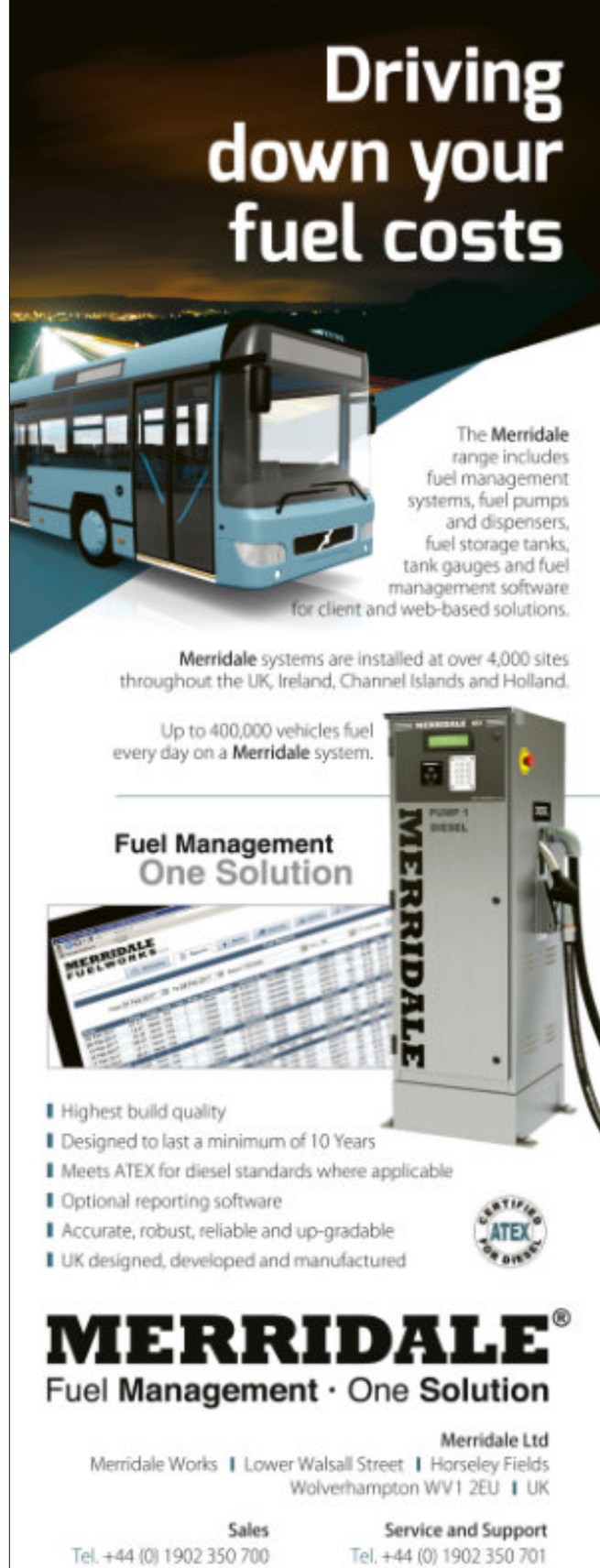
To close out the year, a visit across the Atlantic saw 80 'gas' stations fit with RFID tags, a pivotal piece to the Midas system, widely used across the globe as the portable solution to mis-fuelling below ground storage tanks. Circle K equip their entire Dallas fleet on the hunt for a solution which would end their gasoline/diesel cross-over woes.

The RFID tag contained inside each below ground spill bucket communicates to the Midas drop elbow (where the sensor technology is housed). It does this in order to calibrate the sensor, to determine which fuel it should allow for unloading.

Each spill container sits at various depths, the tags had to be designed in a way that would allow them to be stored safely, whilst reaching the antenna situated on the Midas. This was incorporated with a stainless-steel cable tie and base – colour coded to each fuel grade. Drivers are able to extract the tags from the filling position effortlessly, without risk of removal.

www.berrys.com





New offset fuel chamber platform

Ticking all the boxes – STA Technical

MD Warren Peters

Continuing its mission to mitigate petrol forecourt hassle factors, STA Technical has redesigned its fuel safety platform.

Predominantly used in underground offset fuel chambers, STA's recently evolved platform is now meeting the needs of both installers and tanker drivers, whilst making access and maintenance a whole lot easier, and safer.

Managing director of STA Technical, Warren Peters says:

"Our reputation is built on innovative engineering and evolving products to fulfil the needs of 21st century forecourts; our new platform is a helpful addition to this hassle-busting product range."

Warren concludes:

"Along with our tank and test rigs, fuel calibration trolleys, cone holders, and the bollards and crash barriers we now offer, STA is known as a one-stop shop for innovation, thinking outside the box and engineering-out inherent issues. One of a kind in the industry, this is a reputation we're committed to maintaining and growing."

Benefits and characteristics of the platform include:

- Constructed in hardwearing and durable GRP panelling, complete with abrasive anti-slip surface, and load bearing characteristics
- Designed to fit bespoke requirements – a saw is also provided to undertake any fine-tuning required during installation
- Newly designed slotted leg system ensures platform meets precise height requirements
- End return fitted to all legs ensures load spreading
- The platform's corner leg brackets can be moved to accommodate incoming pipework or other obstacles
- All steel components painted in specialist DTM paint to assist with longevity and anti-rust
- Supplied with yellow grid and yellow steelwork to aid visibility
- Lightweight to assist with portability
- Flatpack system ensures easy and cost-effective shippin-

For further information about STA Technical visit: www.statechnical.com

Out of this world!

CASE STUDY

Global satellite services provider specifies Trenwa Fibrelite trench & cover system

Client: Anonymous
Industry: Telecommunications
Location: Pacific Northwest, USA
Products: Trenwa heavy-duty precast concrete road crossing trenches topped with Fibrelite's LHF traffic-rated composite trench covers
Project Status: Complete

The Fibrelite Trenwa trench and cover system installed at mission-critical satellite facility

This large, multinational satellite services provider has specified the Trenwa Fibrelite partnership trench and cover system for their latest satellite earth station antenna facility in the U.S. The partnership system combines Fibrelite's lightweight FRP composite lids and Trenwa's heavy-duty road crossing precast trenches. This facility provides mission-critical commercial satellite communication services to the U.S. government, other select military organisations (and their contractors), airline and marine operations, television and telecom service providers.

Key requirements

- Protecting and allowing safe, fast access to cables running from antennas to control rooms
- Running cables across road crossings
- A long-term solution
- Safe manual access to cables for monitoring and maintenance

The Fibrelite & Trenwa solution

- Trenwa BHF precast trench with integrated Trenwa/Fibrelite LHF26-60 composite trench covers
- Trouble-free lightweight durable monolithic structure
- Safe walking & driving surface wet or dry (anti-slip/skid)
- Safe manual cover removal by two people at all load ratings
- Long term solution – chemically inert, noncorrosive, and freeze/thaw cycle impervious
- Tried and tested since 1980 (Fibrelite covers) and 1961 (Trenwa precast trenches)
- Excellent insulation against heat
- True HS20 load rating

Above: The Fibrelite Trenwa trench and cover system protects and allows safe, fast access to cables running from the antennas to the control rooms

Left: The trench and cover system provide a solution which is; chemically inert, noncorrosive, freeze/thaw cycle impervious

Fibrelite's lightweight FRP trench covers can be safely and quickly removed by 2 people (image used for illustration purposes and shows a different installation)

We've been busy – and we wouldn't have it any other way

Andy Seal is Hytek's Commercial & Marketing Director. He is particularly proud of their new, revamped catalogue and recently launched liquid level sensor

To say it's been a busy time at Hytek over the last few months would be an understatement of (frankly) epic proportions. As we continue to get back to our very best, we've been ruthlessly focused on making our service to our customers the best it has ever been. And I'm pleased to say that I think we are getting there.

In amongst a wide range of different improvements, there are perhaps three things that I feel most proud about, and I'd like to tell you a little more.

The new Hytek catalogue

Known at Hytek HQ as "Andy's baby", I am personally thrilled to have launched our latest full catalogue. Before we began this project, I spent some time talking to our customers about whether they felt, in the digital age, we still needed a good old fashioned printed catalogue.
The resounding feedback was that we did. And that was all we needed to hear.

As well as that high-level feedback, we also asked our customers if they would like to see any changes to the structure of the catalogue. The overwhelming feedback was for two distinct changes: increasing the font size of the text and returning to a more technical approach. So that is what we have done.

Hopefully you have received your copy by now, but if you haven't and you would like one, just get in touch and we will have one winging its way to you sharpish.

First class products

Product development has always been at the heart of Hytek. Recently, we launched the Hytek SmartGuard remote tank monitoring liquid level sensor. And I, for one, think it's a fantastic product. It's an ultra-rugged, robust remote liquid level sensor, that's suitable for both mobile and static units; and it comes with a battery that lasts over 5 years. It's also IP65 rated, ensuring it can withstand fine dust, water and oil spray.

Suitable for tanks between 0.3m and 4m high, other key features include a tank accuracy of +/-0.5% and impressive reporting capabilities. Users can access their data, tank levels and tank locations via the cloud from any device. If you haven't seen it yet, do get in touch to find out more. It really is a cracking product.

In other product news, we have extended the range of our own Hytek Engineered products. These include high-capacity stainless steel hose reels, which hold 14m x 1" or 20m x ¾" hoses; a 230V IBC mount oil pump kit; and a rotary hand pump kit for oil and diesel IBC mounts.

Finally, we are pleased to confirm that the Pumptronics C-Series Pumps have been reapproved for resale. Look out for the new products' codes; codes ending with a V denote the pumps can be verified. We are approved to verify in house, saving you time and hassle on site.

Our partnership with Tecalemit

We've always believed in the importance of building relationships with quality organisations in our sector, who can help us provide the best possible products and services to our clients. So, we are pleased to now be an authorised UK distributor service and technical centre for the first-class Tecalemit Fuel Management System. You can read much more about this in a separate piece in these fair pages but, suffice to say, being able to offer the Tecalemit Fuel Management System significantly enhances our solutions for our customers.

Looking to the future

As we continue to develop our business, we always value honest conversations with our clients. So, if there's anything you feel we could be doing better, or indeed if you just want to shoot the fuel management breeze (my favourite breeze to shoot), then please do get in touch.

www.hytekgb.com

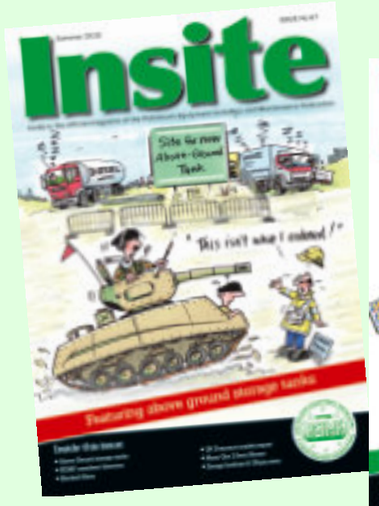
After 10 years

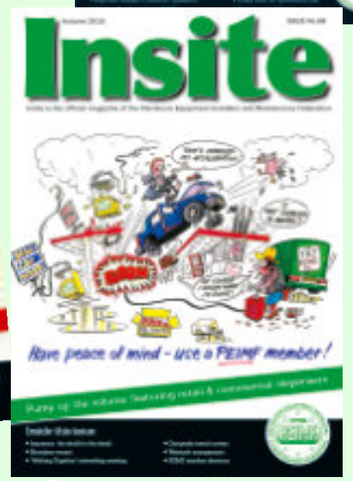
our editor reflects & indulges

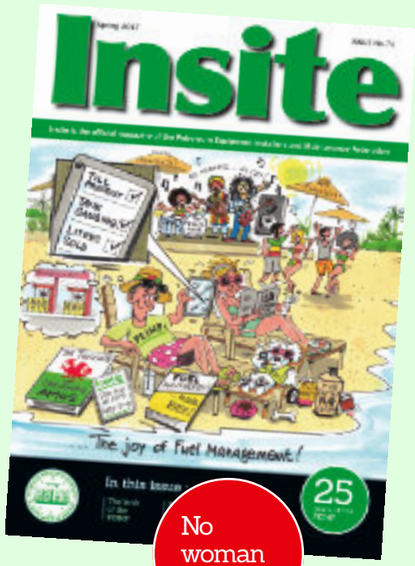
From its launch over 25 years ago we have now published 101 editions of INSITE.

Since I became editor 10 years ago (where's that gone??) the amazing Brian Sage has transformed my notions into brilliant cartoons for our unique front cover. Here's a chance to enjoy them again, as I highlight my own personal favourites. What's yours?

Monger and Son

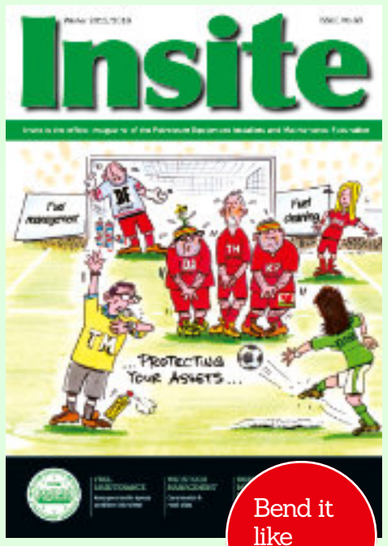






No woman no cry

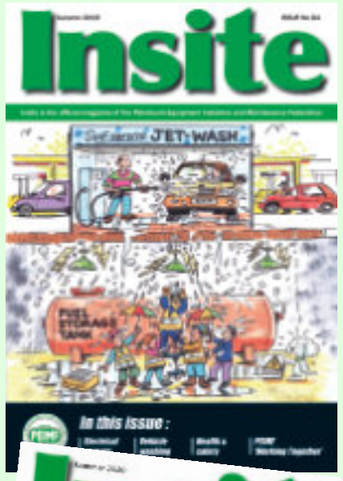
I wish it could be Christmas every day



Bend it like Siobhan

Day trippers!

Paint it black!



The modern stone age family

Somewhere over the rainbow

Thunderbirds are go!

Surprise surprise!

Affordable remote tank gauges

Learn how affordable remote tank gauges are making fuel management more efficient and accessible across various industries.

Is tank dipping still the most effective method for monitoring fuel levels? While both simple and effective, tank dipping can be a time-consuming process; and where businesses today are looking to implement automation and machine learning wherever possible to decrease costs, traditional manual fuel monitoring methods no longer meet the efficiency demands of modern businesses. Remote tank gauges are the clear solution to this problem, and their increasing affordability makes them accessible to a wider range of sectors than ever before.

Making remote tank monitoring accessible

Remote tank gauges have been around for a while, but their adoption has often been hindered by high costs. Thanks to technological advancements, these devices have become significantly more affordable. Linked to cloud-based software, low-cost remote tank gauges allow users to view fuel levels from any web browser, making the technology more accessible to businesses that may have previously relied on manual methods.

How do remote tank gauges work?

Remote tank gauges can be used with a wide range of lubricants, oils, fuel and gas tanks. They use 4G cellular technology to send real-time data about fuel levels to a cloud-based platform. This enables users to access accurate, up-to-date information about their liquid storage tanks from any web browser, without requiring specialised skill or additional equipment. Simply log in, and the required information is immediately accessible.

Remote tank gauges are autonomous, robust, and easily installed systems that are relied on by major oil and gas customers, with a global footprint of more than 100,000 installed on tanks in over 70 countries.

A business case: cross-country efficiency

Consider the example of a fuel distribution business we worked with. With an extensive network of over 300 oil tanks scattered across multiple locations, the logistics of manually checking tanks required substantial manpower and time; with staff driving considerable distances just to perform checks.

After implementing remote tank gauges, the company noticed a marked increase in efficiency. Time-consuming trips became significantly reduced, freeing staff up to focus on core business operations. The overall savings in terms of time and resources were significant.

More than just monetary benefits

Time-saving: The most immediate benefit for many businesses is in time saved. Time once spent on manual checks can be reallocated to core business activities.

Real-time and accurate monitoring: Instant access to real-time data allows for more informed decision-making, timely restocking, and optimised purchasing according to market prices.

Enhanced security: Real-time monitoring adds a layer of security, enabling immediate detection of irregularities or suspicious activities, thus helping organisations to deter and prevent theft, an important consideration for organisations with tanks in remote locations.

Why the shift is worth it

As businesses continue to seek automation and cost-saving solutions, the role of remote tank gauges becomes increasingly clear.

For more information on how OTS Group's ATEX certified remote tank gauges could be the solution to your fuel management needs, we recommend reaching out to experts in the field. Your business, and your bottom line, will thank you.

Contact OTS Group today to discover how you can adopt remote tank gauges to elevate your fuel management strategies and drive operational excellence.

Take the next step toward modern fuel management and explore the benefits of adopting affordable remote tank gauges today.

www.otsgroup.co.uk

Alternative fuels!

How will these impact the future of the forecourt?

Fuelling experts, Dover Fueling Solutions (DFS), consider what the service stations of the future may look like.

As Europe moves towards its decarbonisation targets, station owners are pausing to reimagine the future of the forecourt.

Service stations across the EU will likely be revamped to provide drivers with a whole new consumer-friendly experience.

This raises several questions. Will city centres stop selling petrol and diesel entirely? Might subscription model pricing mean drivers stay loyal to their preferred forecourt? How will retail options change with the increased dwell time of EV charging?

As local governments invest in EV infrastructure and other clean fuelling options, it's clear that the traditional "Stop and Go" service stations may transform into multi-purpose destinations.

An evolved consumer experience?

It's forecast that the European EV infrastructure boasts the most mainstream motoring potential of all clean fuelling options, with 1,390,000 units sold across the continent per year. This is sure to increase dwell times across the forecourt as even the most rapid EV public chargers take 10 minutes to charge.

Forecourt station owners can capitalise on this uptake in dwell time by enhancing retail and entertainment offerings. Convenience stores will likely be transformed into multi-purpose hubs with fresh food and a fast, easy and digitally enabled shopping experience. This could include easy payment through apps, cashless stores and whole-basket scanning, children's play areas, click & collect departments and co-working spaces.

Whereas convenience drove earlier generations, it's likely that sustainability concerns will underpin the buying habits of the future. It's likely stations will have to carefully curate their product assortments, while building out shops and cafes could offer further opportunities to improve profit margins. 66% of prospective EV drivers, for instance, reported they'd frequent retailers more regularly should they provide usable charging facilities.

Pump modernisation

As stated, the forecourt is likely to include a mix of EV charging and other alternative fuels, so spaces in between the pumps will need to be bigger.

One of the biggest threats to the fuelling industry at the moment is petrol skimming, with consumers increasingly falling prey to both thieves swiping their cards and fraud schemes. Enhanced security software at the pump can protect against this.

Other areas of pump modernisation will likely be technologically led too. This could include a consumer-friendly interface with EU languages, the ability to pay by card, app or in-car and digital pricing transparency. Drivers may also soon be able to order refreshments and other items at the pump before collecting in-store, an emerging trend in North America.

Will traditional pumps still be required?

2035 will not signify the complete demise of ICE vehicles. Traditional petrol and diesel pumps will still be required long after the switch.

The average lifespan of an European car is 12 years, which would mean traditional pumps could still be needed beyond 2040. As ICE cars become less mainstream, it's likely that these pumps will be set apart from cleaner refuelling, especially with an expected emphasis on sustainability across all areas of the forecourt, not just in terms of charging and refuelling but in the retail and leisure offering too.

The future of fuel?

In summary, while for the foreseeable future, traditional petrol and diesel pumps are likely to remain fixtures of the forecourt, it's likely that the traditional petrol station will become a completely evolved consumer experience.

Station owners can take full advantage by offering bespoke food, beverage and entertainment options, while forecourt and pump modernisation and recharging subscriptions services will surely become commonplace.

The rise of the alternative fuelling forecourt offers massive opportunities for fuel retailers and businesses should look to double down by offering access to the plug – and the pump.

www.doverfuelingsolutions.com

Uniting Liquid Fuel Distribution Industry For Future Thinking

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& FUTURE OPPORTUNITIES CONFERENCE
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EXPO 2024 is the place to stay ahead of the curve, embrace the shift and collaborate for business resilience in these changing times.

To register to attend or for more information, please visit **www.ukifda.org** or contact UKIFDA's membership and events manager:

Dawn Shakespeare

Email: ds@ukifda.org

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UK and Ireland Fuel Distributors Association (UKIFDA)

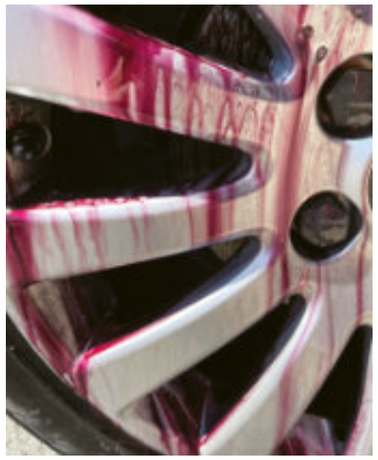
New jetwash offerings from Electrajet

Electrajet presents new to market premium model units

Genuine 8 individual wash modes, fully HMI operated jetwashes; giving customers clear and precise information on wash functionality.

Wash mode functions include:

- EJ Easy wheels: Iron extract dedicated wheel cleaner
- Extreme snow foam - our best foam trigger to date
- Hot traffic film remover wash, degreasing and soil removal at high pressure
- Arctic white out foam brush, super soft brushing with the foam lather created
- Power rinse, creating up to 2200 psi rinsing if required
- Gloss wax & paint protector, using EJ Runaway waxing solution
- Spotless high pressure RO rinsing, providing streak free, sparkling, finishing results



These new features and exceptional cleaning results are achieved from a completely new design and build including:

- New PLC & HMI software
- Touchscreen (HMI) function controls & much more
- Complete control NTS shutdown
- Enhanced RO system with designated PLC control & waste water recycling
- Reduced water consumption on all modes
- Redesigned chemical dosing system, offering significant reduction in chemical consumption, up to 60% less than previous models
- Low pressure drop system providing Increased, motor, HP pump seal & unloader valve life span
- New foaming system with venturi & compressed induced air
- Enhanced automatic blow down frost protection & internal heating system

We have also launched our standard range of jetwashes, to include some of the features above. They are available either with, or without the snow foam trigger option, touch screen or physical button control.

Plus 2 of the latest 4in1 multifunction towers offer:

- Essential tyre inflation
- Auto dosed screenwash filling
- High powered self-cleaning filter vacuum
- New enhanced fragrance delivery system

www.electrajet.co.uk

UKPIA changes name to reflect move towards more sustainable fuels

UKPIA has changed its name to Fuels Industry UK, to demonstrate its evolving remit to champion low carbon fuels as well as traditional petroleum products.

The change reflects its members' ambition to manufacture and supply the biofuels, low carbon hydrogen and other low carbon fuels needed to meet the UK's ambitious net zero targets.

CEO Elizabeth de Jong said:

"Our name change reflects that the sector is essential to UK Government achieving its net zero targets by manufacturing and supplying the low carbon fuels needed.

"Fuels Industry UK members are increasingly manufacturing and supplying low carbon fuels such as renewable diesel, biofuels and Sustainable Aviation Fuel (SAF), which use non-petroleum feedstocks."

Fuels Industry UK members are at the forefront of SAF delivery. As principal users of hydrogen in the UK, the downstream sector can also be major first customers for low carbon hydrogen projects. In addition, members have global expertise in Carbon Capture Utilisation and Storage (CCUS) projects, which will be vital in the transition to net zero.

Fuels Industry UK represents eight manufacturing, supply and marketing companies that operate the six major oil refineries in the UK and source over 85% of the transport fuels used. Our nine associate members comprise a wide range of companies: from heating fuel supply and Liquefied Natural Gas (LNG) imports, renewable and sustainable fuel producers, to terminals and pipelines.

www.fuelsindustryuk.org

Directory of PEIMF+ members

A & G Group Ltd
01579 344503
www.aggroupltd.co.uk
Electrical and tank testing, supply installation and servicing of pumps

A & R Pavelin Transport Ltd
01268 270470
Distribution & collection of pumps and forecourt equipment

AbFad Ltd
0191 543 7166
www.abfad.co.uk
Tank linings, leak detection, rope access

Adler & Allan Ltd
01992 657400
www.adlerandallan.co.uk
Tank cleaning & lining, VR testing, fuel polishing, sampling & analysis. Spill response

Aidan Strain Electrical Engineering Ltd
02830 888861
www.aseeltd.com
Electrical & mechanical generator installation contractors

Air-Serv
01942 722333
www.air-serv.co.uk
Air lines, jetwash, vacuums, servicing, chemicals

Alpha Eco Ltd
01698 882045
Construction & pipework installations for petrol filling stations and reactive maintenance

Andel Ltd
01484 845000
www.andel.co.uk
Pollution control, tank & fuel maintenance

Ancorra Environmental Services Ltd
0151 546 3012
www.ancorraenvironmental.co.uk
Forecourt maintenance, tank & vessel cleaning, foam injection

Arnold Diggle & Co
01229 582769
www.arnolddiggleandco.co.uk
Tank cleaning, oil depot decommissioning/ demolition & remediation

Baltor Systems
02890 603232
www.baltor.co.uk
Design, supply & installation of fuel equipment

Broham Forecourt Developments Ltd
www.broham.co.uk
01206 210 455
Specialist principal contractors in retail forecourt & commercial fuel installation

Berrys Technologies Ltd
0121 558 4411
www.berrys.com
MIDAS, OP, USpump spares, pipework, tank lid assembly, forecourt equipment

Bulk Meter Services Ltd
01233 740134
www.bms-ltd.com
Supply, install & service bulk meters & registers for fuelling applications

Centaur Fuel Management Ltd
0870 757 6323
www.centauronline.co.uk
Installers of fuel pumps, tanks & fuel management equipment

Membership code of ethics

In addition to our complete review of the PEIMF+ constitution, we have also had a team dedicated to reviewing and updating our members' code of ethics.

All membership renewals will be accompanied by this document, as all member companies are expected to agree with, and adhere to, these principles:

OUR AIMS AT ALL TIMES ARE:

- To provide the best possible service to our clients and customers.
- To observe superior standards of conduct in our dealings with clients, customers and peers regarding integrity, fairness and honesty.
- To maintain a strict duty of confidentiality of our clients' affairs.
- To acknowledge that contracts should be fair to all parties and, where appropriate, to settle disputes by voluntary agreement or impartial arbitration.
- To continually strive to achieve best practices and methods relevant to our industry.
- To provide superior quality leadership, materials and workmanship to the best of our ability.
- To undertake to share best practices and learnings with other members thus promoting our 'Working Together' philosophy.
- To show that, by virtue of membership of PEIMF+, the members have and do signify their commitment to the above principles.

Centre Tank Services
0121 351 4442
www.centretank.com
Fuel dispensing, storage tank and AdBlue equipment, Piusi products and Husky nozzles

Clarke Construction Services Ltd
01543 361636
www.clarkeconstruction.co.uk
Civils, tank and pipe installation and maintenance, knockdown/rebuild

Commercial Fuel Solutions Limited
02380 118 670
www.commercialfuelsolutions.co.uk
DSEAR specialist. Manufacturer and distributor of fuel storage and handling systems, including bulk metering, fuel filtration, fuel management, AdBlue and Hydrogen.

County Pumps Ltd
01295 780746
www.countypumps.co.uk
Installation repair and service of fuel systems, pumps & fuel monitoring systems

C P Installations Ltd
01702 544442
www.cp-installations.co.uk
Tank & pipework specialists, electrical services, site maintenance, decommissioning

DMCS Ltd
01244 289161
www.dmcslimited.co.uk
Calibration of bulk liquid storage vessels

Dover Fueling Solutions
01695 52175
Fuel management solutions for independent, hypermarket and multinational

DP Fuel Tank Services
01737 767524
www.dptanks.co.uk
Fuel tank specialists, inc. cleaning, excavation, nitro-foam inerting & decommissioning

Durapipe UK
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www.plxpipe.co.uk
Manufacturer of plastic pipework systems

D R Forecourt Services Ltd
01691 610733
Installation of all equipment on petroleum/dispensing stations

E & S Environmental Services Ltd
01993 852419
www.eandsgroup.co.uk
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EdgePetrol Ltd
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www.edgepetrol.com
Software start-up providing real-time visibility to petrol retailers

Elaflex Ltd
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www.elaflex.com
Forecourt dispenser nozzles & accessories

Electrajet Ltd
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A leading design & manufacturer of pressure washing equipment for over 30 years. Full range of forecourt & commercial equipment

Equipe Environmental
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www.equipeenvironmental.co.uk
Supply, install & test tanks, gauges, covers, pipeworks, pump spares

Eurotank Service Group
0800 311 2149
www.eurotank.eu.com
A group of forecourt engineering service companies

Falcon Fuel (N.I.) Ltd
028 3884 2639
www.falcon-fuel.com
Engineering services for tanks, gauges, pipework, pumps, POS, fuel polishing, tank cleaning

Fast Fuel Services Ltd
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www.fastfuelservices.co.uk
Fuel tank & pump maintenance, installations and service contracts.

Fleetsolve Ltd
0151 353 2870
www.fleetsolve.com
Biofuel combined heat & power systems

Forecourt Installation and Maintenance
028 3885 1491
Pumps & equipment service & installation

Forecourt Solutions Ltd
01278 428833
www.forecourtsolutionsltd.com
Manufacturers of lightweight composite covers and containment products

Franklin Fueling Systems
028 3885 2870
www.franklinfueling.com
Pumps & equipment service & installation

Fuelcare Ltd
01743 360784
www.fuelcare.com
Fuel polishing, testing, sampling experts

Fuelcom
02890 410655
www.fuelcom.com
Install & maintain pumps, pipework, tanks & gauges. Plus risk assessment in Ireland

FuelMii
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Fleet mobile refueling service

FuelQuip Ltd
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www.fuelquip.co.uk
Suppliers of fuel management, pumps, tanks, gauges & alarms

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www.fuelstoragesystems.com
Installation and maintenance of fuel systems, including fuel pumps, tanks and gauges

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Supply/service jet wash, vacuums, air towers & chemicals. Profit share & outright purchase

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Greenchem Solutions Ltd
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www.greenchem-adblue.com
AdBlue and AdBlue tank manufacturer

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www.griphero.com
Design, manufacture and supply dispensers of disposable hand protection on forecourts

GSS Training Ltd
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Health & safety, environmental and business training, inc. SPA passport & risk assessments

Henderson Technology
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Epos, payment & loyalty solutions, back office, head office, installation & maintenance

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Hytek (GB) Ltd
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Fuel dispensing & management, lubrication products

Continued on page 50

Continued from page 49

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admin@idealtanksandpumps.co.uk
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IMF Solutions
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www.imfsolutions.co.uk
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Industrial Services
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www.fuelworking.co.uk
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Istobal UK Ltd
01299 826967
www.istobal.co.uk
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Specialist insurance services to the petroleum industry

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Forecourt branding specialists, accident repairs and new companies

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Fuel dispensers and forecourt technologies

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www.petrol-signuk.com
Supply & install brand signage, sister company to Global MSI

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Manufacture small above ground petrol tanks

PFS Fueltec Ltd
01376 535260
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Specialist suppliers of fuel equipment to contractors owners/operators

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Specialists in PFS fuel systems, construction & maintenance

Project-A International Ltd
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Carbon fibre test measures for checking the accuracy of fuel dispensers

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www.suresite.co.uk
Providing health and safety (risk assessments and compliance audits) card processing, training & wetstock services

T.P.I (Ireland) Ltd
0771 5207168
www.tpi-ni.co.uk
Pump & tank installations, tank / pipeline testing, decommissioning and maintenance

Tanks & Pipework Ltd
01474 855587
www.fassuk.com
Tank / interceptor cleaning, inspection, relining. Fuel polishing, uplifts, transfers

Toureen Retail Ltd
0208 424 7999
www.toureenretail.co.uk
Specialists in PFS construction, fuel systems, fit out maintenance, groundworks & signage.

Transflo Instruments Ltd
0844 257 8181
www.transflo.co.uk
Fleet fuel management systems, including pumps, gauges and software

TSG
0333 015 3001
www.tsg-solutions.com/uk
Tokheim & Wayne Dispensers, Karcher Car Wash, EV Chargers, EPOS, Hydrogen/ CNG Equipment

The Triscan Group
0845 225 3100
www.triscansystems.com
Onsite commercial fuel management solutions, including tanks, pumps, gauges & software

United Pipework Services Ltd
01922 722737
www.united-pipework-specialists.co.uk
Forecourt construction & pipework services

VARS Technology Ltd
www.varstechnology.co.uk
Forecourt protection and parking solution

Vectec Ltd
01296 624548
www.vectec.co.uk
Diesel fuel dispensing, storage & management

Washtec UK Ltd
01371 878800
www.washtec.com
Vehicle valeting, maintenance and service

Western Forecourt Services
01446 736900
www.wales-and-west.co.uk
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Westfield Services (UK) Ltd
01924 477324
www.westfieldservicesuk.com
Contractors for pumps, pipework, electrical and building work

West Fuel Systems Ltd
01709 296767
www.westfuelsystems.co.uk
A comprehensive & professional fuel system installation & maintenance service

Worcester Petroleum Services Ltd
01905 620053
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Xmo Strata Ltd
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www.xmostrata.com
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