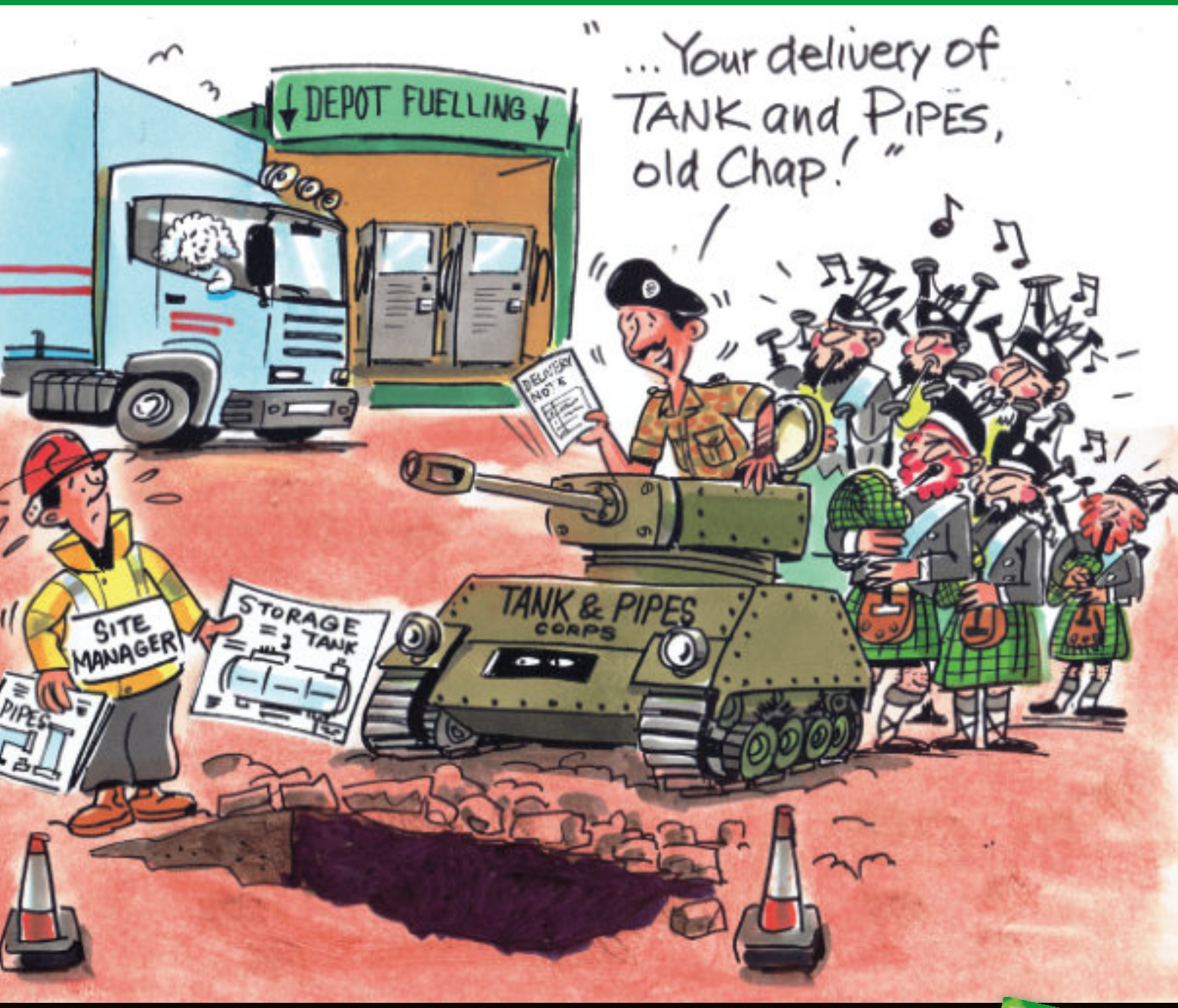
Spring 2021

ISSUE No.90

Insite

Insite is the official magazine of the Petroleum Equipment Installers and Maintenance Federation



In this issue :

Storage tanks • Tank services
Pipework • Marinas

PLUS:
The Green Pages
New Fuels Guide

A lot has happened!

At lot has happened since I wrote the intro to our previous INSITE. At that time, there seemed a light at the end of the tunnel with the new vaccine; but then WHAM! The 2nd wave hit. So the start of 2021 has been tough for everyone, but, with the success of the vaccination programme, there really is a positive look towards the end of the year. Therefore, please excuse my confidence, but I think the photo is OK this time round.

Over this period, mental health has becoming far more prominent in our collective conscience. 'Mates in Mind' is a very important charity, which particularly highlights the prevalence of problems, and suicides, amongst men (particularly young men). Our industry currently has a predominantly male-orientated workforce, and we have been requested by a number of our members to promote awareness of mental health issues. So please take a look at pages 15-16.

You can also read about the great work of the 'Social Bite' charity, which supports homeless people, on page 48.

On the business front, this edition features storage tanks & tank services and pipes & pipework (including some specialist marina installations).

Thanks for your support

We're very pleased to welcome a number of new advertisers in this issue, so to our colleagues from: Greenchem, Petrol-Sign, Centre Tank Services, Fairbanks, Oamps and Istobal – we thank you for your support.

And of course, thanks all our regular contributors; we can't do it without you. As a not-for-profit organisation, we really appreciate your support; and our top quality readership guarantees value for your marketing budget.

Please support our advertisers and consider our PEIMF members, whenever you are sourcing contractors, products and services.

Please stay safe, and hope to see you around the country sometime later in the year.

David Honeyman
Editor

New PEIMF members

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Front cover illustration
Brian Sage

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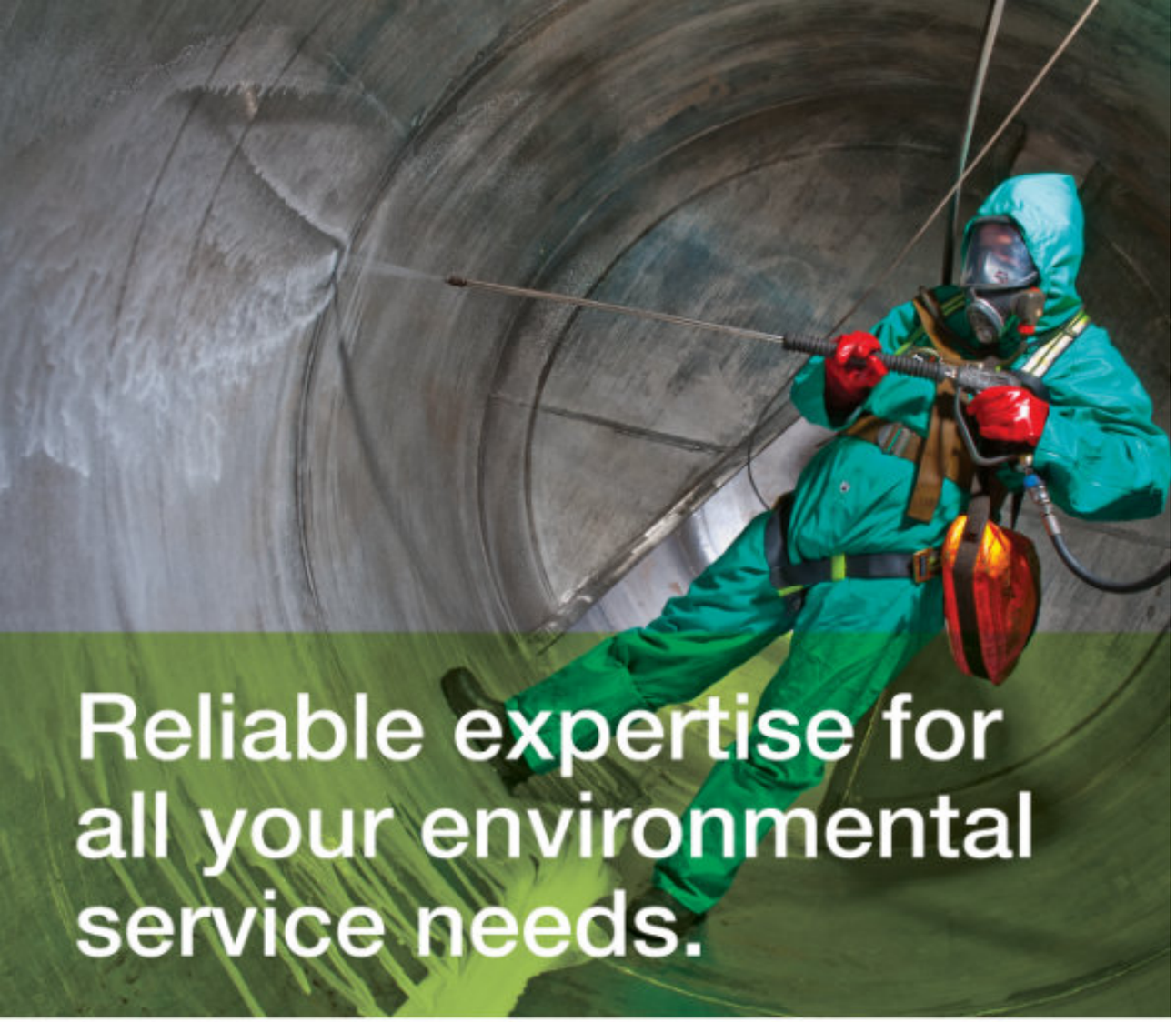
Advertisers and the suppliers of contributed articles are asked to ensure that material submitted is fair and accurate at all times. The Editor reserves the right to amend or withdraw such material which may not comply with this request after consultation.



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The industry loses two big characters

Jonathan Coombes

David Honeyman reflects.

I knew Jonathan for around 25 years, most recently with E&S/Adler and Allan, as well as Environ, Dunclare, MDM Services and others. Affable, sociable, helpful and professional, JC was a great friend and supporter to us; originally at the roadshows, and also contributing to the PEIMF. I believe he was responsible for the first ever advertising in INSITE and helped Frank at trade events.

Ed Wheeler from Eurotank shares his memories;

"I spent a lot of time with JC in the first few years of Eurotank. He had a natural flair for sales and always fantastic company.

When he joined Eurotank we worked very closely and even lived in a camper van for a week at Automechanika. Seven days and seven heavy evenings of drinking, smoking and eating pork and sauerkraut. Great times, great memories."

Martin Shanks, M.D of Amlite commented;

"Really Sad News, my old friend and colleague from Environ. A real character and respected throughout the industry."

Our thoughts are with his family.

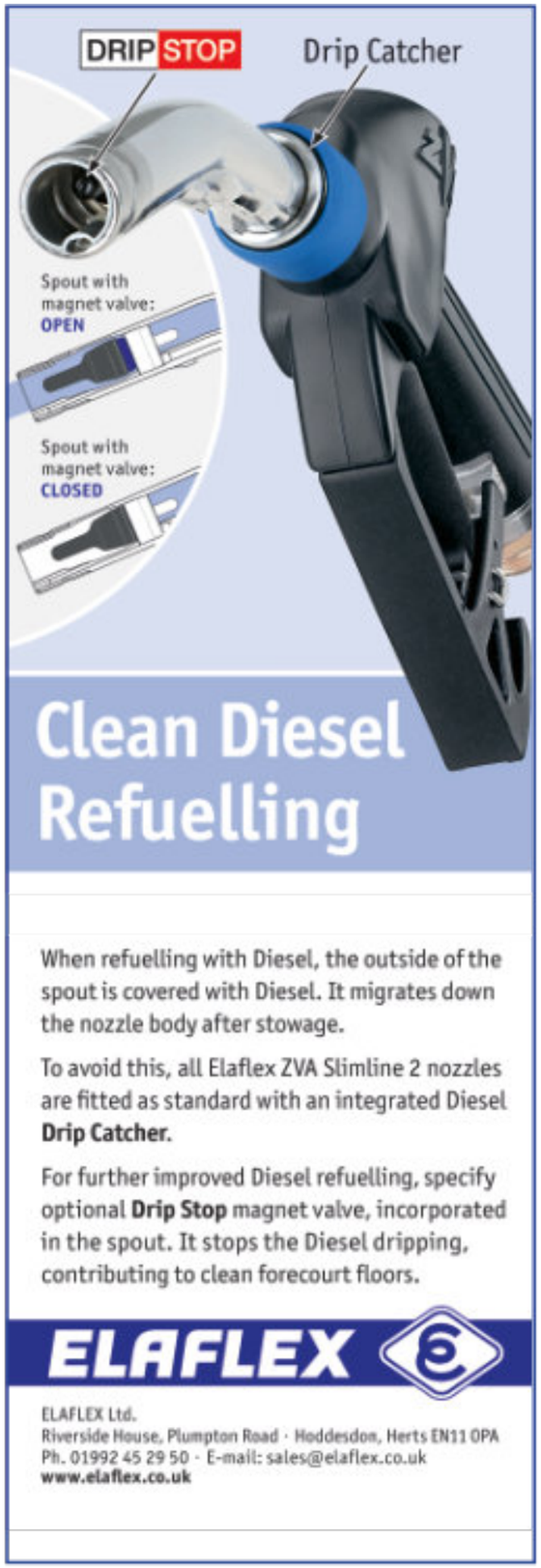
Ian Taylor, Hytek

Ian Taylor and Kevin Arnold were the founders of Hytek (GB) Ltd back in 1985. Ian was the salesman while Kevin looked after the rest of the business and they were a perfect match, often referred to those close to them as "A marriage made in heaven".

Ian retired from the business several years back and spent his time updating his old manor house plus many happy hours in his vegetable gardens and in true Ian Taylor style it was on a large scale!

Ian was a unique, always positive individual, with a catchphrase that summed him up "Every day is a wonderful day." When you were around him you got to understand why this was very true and it rubbed off on you.

Ian passed away peacefully with his wife by his side. To sum up in his own words "I have had a charmed life and had a ball". Ian was a character in our industry and a true gentlemen. He'll be missed but never forgotten.



Clean Diesel Refuelling

When refuelling with Diesel, the outside of the spout is covered with Diesel. It migrates down the nozzle body after stowage.

To avoid this, all Elaflex ZVA Slimline 2 nozzles are fitted as standard with an integrated Diesel **Drip Catcher.**

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E10 petrol now official

The Department for Transport (DfT) have now officially announced that during the Summer the standard (or 'Premium') petrol grade in the UK will become E10.

Department for Transport

E10 petrol contains up to 10% renewable ethanol, which is added to reduce CO2 emissions and help tackle climate change. E10 petrol is compatible with almost all (95%) petrol-powered vehicles on the road, including all cars built since 2011.

Filling stations will clearly label petrol as either E10 or E5.

About E10 petrol

E10 means petrol contains up to 10% renewable ethanol. To date, petrol in the UK has contained up to 5% renewable ethanol (known as E5). It is already widely used around the world and has been the reference fuel against which new cars are tested for emissions and performance since 2016.

The change in fuel only applies to petrol; diesel fuel will not be changing.

The main benefit of E10 is that it reduces overall levels of CO2 emissions. By blending the fuel with up to 10% renewable ethanol, less fossil fuel is needed.

Compatibility

Vehicles

Almost all petrol-powered vehicles on the road are compatible with E10 petrol. At present, around 95% are approved for use with E10 and this is increasing all the time.

All new cars manufactured since 2011 are compatible and most cars and motorbikes manufactured since the late 1990s are also approved by manufacturers to use E10.

The following vehicles, however, may not be compatible with E10 fuel:

- classic, cherished and older vehicles
- some specific models, particularly those from the early 2000s
- some mopeds, particularly those with an engine size of 50cc or under

You can check whether your vehicle is approved to use E10 using the government's E10 compatibility checker.

Why the introduction of E10 should make you think about your wider forecourt strategy

Although there are no immediate issues or updates required when switching from E5 to E10, Mark Griffiths, Head of Business Development, Adler and Allan explains the maintenance impact, and how the grade changes could affect your wider site operation.

E10 is made from products including low-grade grains, sugars, and waste wood. Its green credentials come from the biofuel's 10% renewable ethanol content.

E10 may not cause any initial problems, however longer-term, sites may experience issues with tank lids and pipework, seals and gaskets and tank linings.

Robust maintenance

One thing is for certain however, a greater percentage of ethanol in the fuel = a greater potential failure rate. Therefore, it is wise to ensure you have a robust maintenance contract in place with an experienced environmental partner, who can advise on any changes required to your maintenance schedules.

The immediate requirement for changing will be straightforward with fuel uplifts and transfers across your site, but you will need to consider your pipework and vent stacks, vapour recovery, signage, and electrical reprogramming of the gauges.

However, for the grade changes to be straightforward it depends on the configuration of your site. You may not have multiple petrol tanks but still want to offer both E5 and E10. With the gradual phasing out of new diesel vehicles by 2025 and petrol by 2030, you may want to re-configure your diesel tank to petrol to ultimately phase diesel out.

You should work with an experienced environmental partner to help you plan a strategy for your forecourt from E10 to potentially EV, hydrogen, and beyond.

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The possibilities are endless

It's time to embrace them

The future. It's always changing, always evolving. That's why at Dover Fueling Solutions we offer upgrade and retrofit kits for our Wayne and Tokheim dispenser lines, enabling your fuel business to adapt with the times. We've got you covered, no matter what the future holds. Visit our brand-new parts website at **doverfuelingsolutions.com/genuineparts** to invest today.

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PEIMF round up

From our virtual AGM

Who would have thought at our AGM in November 19, after a social dinner and zipping around in gokarts, that we could have possibly predicted the past year.

Some key pointers came from that 2019 AGM, and our subsequent committee meetings including:

- PEIMF scope to include 3 core areas: Retail forecourts, commercial fuel installations and new fuels, and our constitution will be updated accordingly.
- '*The Green Pages*' supplement introduces new fuels to readers.
- Over 10% growth to around 135 members during the past year.

From the start of the pandemic, we acknowledged how important it is for us to continue publishing INSITE for our members. Some other trade publications are not doing this and just going digital.

We do both.

But we feel that communicating with, and supporting, our members in these difficult times is very, very important.

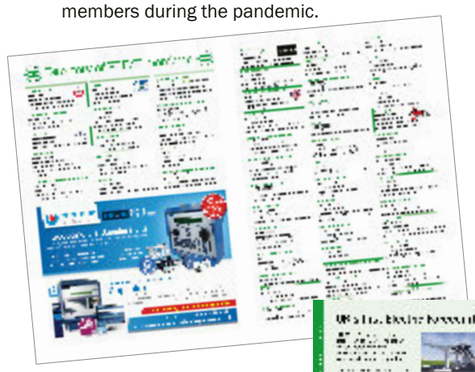
We can send you an email link to INSITE and offer mailing to your home address.

We made the decision a couple of years ago to grow the distribution from a thousand to 1500 – at no extra cost to advertisers! It's a top quality distribution list. We are consistently publishing 60-page issues, which are bigger than ever, and all our members are included in every edition.

INSITE offers great value for money to advertisers and, as a not-for-profit organisation, we really appreciate your support.

More member benefits

Firstly, the proposed annual membership fee increase from £175 to £195 pounds was postponed for a year, as a gesture of support to our members during the pandemic.



MEMBERS DIRECTORY

You'll find our members directory at the back of every INSITE and it means every member is included every time – FREE! Or you can pay £95 for an enhanced entry.

MEMBER UPDATE NEWSLETTER

We started the email newsletter in May to include industry developments, events, INSITE info, technical work etc.

This has been a great investment in our membership, so if you're not receiving your copy, please let me know.

GREEN PAGES

The Green Pages was launched last Spring and we include this 8 page supplement in every publication. It has so far included worthwhile articles on many new fuels.

We are also planning to introduce some regular webinars on New Fuels, with each meeting covering a specific topic, to help continue educating and informing our members.

LINKED IN GROUP

We created our new member linked in group, which is available for any staff from our member organisations to join. We currently have around 90 members and make a worthwhile post every week or two. If you're not in the group, let me know and I'll invite you.

Continued on p11

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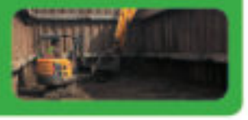

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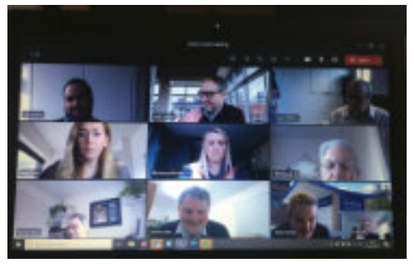
Continued from p9

WEBSITE

Our website peimf.uk continues to improve and include more and more information, and contains a Members-only section.

We put all our documents here, like minutes of meetings, accounts, the constitution etc and more and more links to guidance.

COMMITTEE



Here they are in all their glory. Understandably, our quarterly committee meetings in Birmingham have been on hold. So since March we have met remotely on a monthly basis. This means our members benefit from the regular commitment and input from our very experienced and capable team, who represent a wide range of areas in the industry. We thank all of them for their commitment.

Terry Moody, Siobhan Keogh are re-elected and we're delighted that M.D of Berrys Technologies, Jacque Williams has joined us. Michelle is remaining in the hot seat for a further year. Ian Burns has stood down, and it's great for us to have Andrew Olive as our new Deputy - stepping up to Chairman next year.

So looking forward

We look forward to this year with renewed optimism, as Michelle is determined for our progress to continue.

There's lots to do, and in just 12 short months, our new Chairman will come in and, I'm sure, give us a further boost.
(NO PRESSURE THERE THEN ANDREW).

All the best, David Honeyman
david@peimf.com

Phil Monger, PEIMF Technical Officer

Department for Transport – E10

The DfT announcement on the introduction of E10 in September presented the justification that it could save 750 Kilotons of carbon a year (equivalent to taking 350,000 cars off the UK roads). Some of you might think it better to remove these 350,000 vehicles and reduce the number of traffic jams! Government, however, sees this as a significant step towards the decarbonisation of road transport, in their drive to reach the zero target by 2050.

All new petrol cars produced since 2011 have been designed to use E10 and many older cars are also compatible; leaving a small number of old and classic cars; and some motorbikes might also fall into this category.

A website has been launched for motorists to verify their vehicle's compatibility. This is complemented by basic guidance and FAQ's. The communications campaign is designed to kick off at the end of this month, giving ample time for motorists to check on their vehicle suitability long before the September launch. Labelling of dispensers will commence in July, to be ready in time for the September launch.

HM Treasury – red diesel tax exemption

The Government has published responses to the consultation proposals to remove the rebated fuel entitlement for certain sectors by April 2022. Four hundred and thirty-six responses were received, including Trade Associations, representative organisations and individuals.

It seems despite the views expressed, the intention is apparently still to go ahead with the intention to remove entitlement for many of the regular purchasers at retail filling stations and some commercial storage facilities.

For many current users of rebated diesel for mobile generators and other machinery, the switch to road diesel will only increase costs and do nothing to change the environmental impact. The suggested switch to alternative fuels is totally irrelevant as they currently don't suit existing machinery.

It is inevitable that this move will result in many retail sites withdrawing from the sale of red diesel and will convert the tanks for storage of other fuels. The requirements to remove all traces of dye from tanks converted to the storage of white diesel will create a major task for specialist contractors, possibly resulting in the storage of petrol. In such circumstances, site operators will need to check that these tanks are included on the storage certificate for holding petroleum spirit or a new certificate will be required.

Department for Business, Energy and Industrial Strategy (BEIS)

The department has published a list of consultations that were announced in the Energy White Paper. Most of the consultations will be of general interest rather than sector specific. Members wishing to receive a copy of the list can obtain one from the PEIMF.

Petroleum Enforcement Liaison Group (PELG)

This committee set up three sub-groups to implement the recommendations of HSE following the Post Implementation Review of the 'Petroleum (consolidation) Regulations 2014(PCR)'. Response to the consultation indicated a number of weaknesses to address, including: better and simpler guidance for site operators, training for petroleum inspectors and targeted inspections for the higher risk areas. This work is already under way and several online meetings have already taken place with allocation of tasks to individuals. The group is still awaiting the clarification of certain requirements of PCR from HSE.

Digital transformation of wash facilities

ISTOBAL makes it happen : with a free subscription plan to 'Smartwash'

ISTOBAL, a leading supplier in vehicle wash and care solutions, facilitates the digital transformation of car wash facilities, with a free subscription plan to 'Smartwash'.

Istobal has launched a campaign to drive industry digitalisation, with its commitment to providing innovative global solutions to increase profitability, facilitate business management, and contribute to customer loyalty.

Successful across Europe

Smartwash has been successfully implemented across Europe; achieving 100% connected facilities for maximum performance and efficiency, transforming customer experience, making it quicker, easier, more efficient and more fun.

By incorporating IoT and Big Data, the solution allows services to be managed digitally in real time and on any device, thanks to the connectivity of all the wash equipment (rollovers, tunnels, jet wash facilities and vacuum cleaning areas). It extracts and analyses accounting and installation status data as well as user behaviour to increase profitability, management and time efficiency. Smartwash reduces waiting times between washes, increases the frequency of washes and improves the user experience; with digital payment methods and personalised promotions.

As a new feature, Smartwash incorporates the activation of unlimited monthly wash fees for the end user, including a digital loyalty card (ISTOBALCard). Customers can accumulate credit and obtain discounts, paying only for what is consumed.

Smartwash without monthly fees

The monthly, no-cost plan includes the digital management of multiple facilities, being able to know and manage accounting data such as revenue or promotions, and to create a database of facility users.

It also contains the ISTOBAL App for the consumer, with the location of wash facilities, payment activation of code washing and ISTOBALCard loyalty card, among other functions.

The car wash operator can also see the status of connected equipment in real time, plus other data such as number of washes performed, programmes executed and errors.

Smartwash is a pioneering technology that comes as standard with most ISTOBAL car wash equipment. To be able to access the plan without monthly fees and enjoy the main benefits for free, you only need to have one basic connectivity package.

Smartwash Premium

Smartwash by ISTOBAL also has a Premium subscription model, with monthly fees that include all the extra functions, both in the business operation and maintenance part of the equipment. This allows you to increase the control and efficiency of your car wash business, resulting in maximum profitability and the best wash experience.

Smartwash Premium enables activation of the wash and emergency stop via the app, without the user having to get out of the car. It also includes the launch of unlimited promotions, historical revenue statistics data, and the possibility to integrate Smartwash with third-party APIS in existing apps and even to generate custom apps.

Additional maintenance benefits include control of consumables, product levels, water and energy consumption as well as remote control of connected equipment.

Smartwash Fleets, the first digital platform to automate the wash process of any fleet, is available with the Premium subscription.

ISTOBAL, leader in the car care sector

ISTOBAL is a multinational Group, based in Valencia. It's a market leader in the design, manufacture and marketing of car wash and car care solutions. With over 70 years' experience, ISTOBAL places the emphasis on innovation and high technology to provide products and services that generate high returns for the business and great added value for users.

The Group exports its products to more than 75 countries, thanks to a worldwide network of distributors. It has nine subsidiaries and three manufacturing plants across Europe and the US. International sales currently account for 70% of its production.

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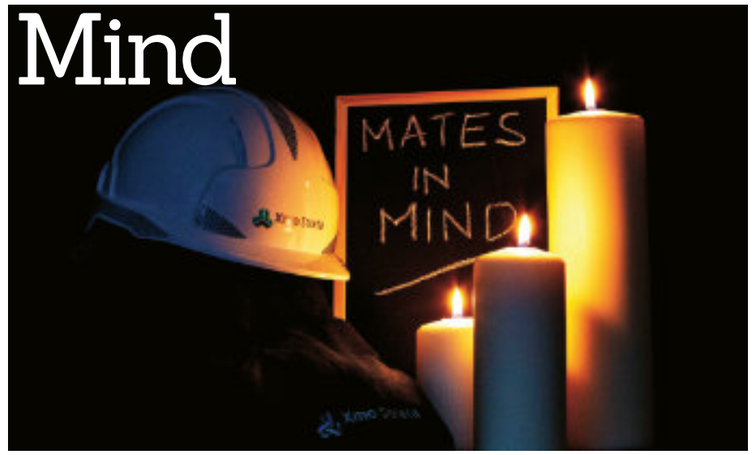
Mates in Mind



Steve Martin, the owner of sign installation company Xmo Strata and digital reconstruction and scanning company Spectis GB, is an active supporter of the mental health at work charity 'Mates in Mind'.

Along with some of his employees, he qualified with the charity as a Mental Health First Aider. He's also a member of its Construction Sector Interest Group, which (amongst other things) lobbies Government on mental health issues. He believes that enlightened company leaders should regard mental health as an element of their health and safety policies. Here, he explains his position.

According to figures compiled by **Mates in Mind**; before the pandemic, one in six UK workers experiences depression, anxiety or stress. The construction industry employs about 2.1 million people in the UK (6% of the workforce) so on these figures, 350,000 construction workers have some level of mental health difficulty at any one time.

Think about that.

If you're on a site with 50 people, 8-9 of them will be having mental difficulty.

For reasons we don't yet understand, the construction industry (which includes forecourt work) seems to be particularly plagued by mental health issues. So within our industry, these generalised figures probably understate the reality.

But if the statistics in my first paragraph don't engage your attention, how about this little showstopper?

On average, ten construction workers take their own lives every week.

Suicide affects men, women, and children; but it affects men more. In particular, it affects men in the construction industry.

Why?

It may be as simple as the fact that men face specific challenges with mental health, and the construction industry is still, predominantly, male. But whatever the reason, construction has a particular problem with mental health, and **Mates in Mind** is trying to address it, which is why the charity has my total support and my active involvement.

The leading cause of death for young men? Suicide.

Suicide is now the leading cause of death for men aged between 15 and 49, and these folks are often in employment.

A 2017 study by the Office for National Statistics found that in England, the risk of suicide amongst low-skilled male labourers (particularly those working on construction sites) was three times higher than the national average; which means that industry leaders have at least a strong moral responsibility to do something about it.

On the upside, working in a large industry may mean that there's likely to be someone close at hand who can help, or who is experiencing similar problems. That's important, because those struggling with mental health frequently become socially isolated.

Isolation in mental health can feed itself; those who are suffering can exhibit behaviour which drives people away (they may seem to be miserable, aggressive, defensive, suspicious, cynical, critical of others and/or negative, for example).Once they've driven people away, the condition becomes worse, because of their isolation. It's a vicious circle.

It's simplistic, to suggest that anyone suffering from mental health issues signals the fact, in ways that are as obvious as those described above.

Some will, some won't.

Some people just go quiet, and very few will openly declare that they are suffering. Men in particular are resistant to talking about it, which is why the condition can remain hidden.

We all have a moral responsibility to look for this and reach out to anyone whose conduct seems unusual or who seems to be internalising, drawing into themselves, or anyone who displays irrational or unexplained extremes.

But remember that mental health issues can also be long term, and may be present for years without diagnosis. So it isn't as simple as looking for people who have undergone recent behaviour changes.

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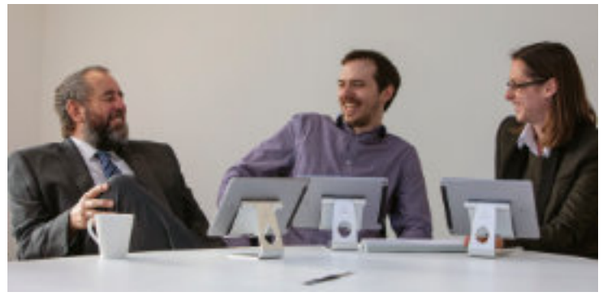

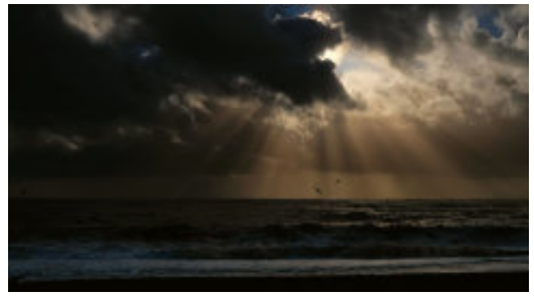

Continued from p15

Grumpy people

Grumpy people were once the butt of workplace humour; now, we know better. Or at least, we should.

In the old days, grumpy people were the subject of humour, and even workplace bullying. Now we should all be wondering if there's something serious underlying the way they present to the world.

Mental health has always been on the agenda in my companies (we've had a free, confidential counselling service for employees for years, provided by a specialist firm). But thanks to the leadership shown by organisations like **Mates in Mind** we've become even more aware of it recently, and hopefully, better able to help those who are struggling.

As an industry, we do have the ability to tackle this; we can't eliminate mental health issues, just as we can't eliminate accidents at work. Suicides will always happen, but the scale of the problem reflects appallingly on our sector; and we can certainly reduce that, dramatically (as we have done, in recent decades, with workplace accidents).

It's about increasing everyone's understanding. We're leading from the top but it's vital to recognise that this isn't just an issue for management, or the NHS, or families (though they all play an important role, of course).

Leaders need to create the environment in which mental health awareness is permitted, but once that's happened, it isn't only a top-down process. It's on all of us, whether we work as the Managing Director or an office intern, as skilled trades people or payroll administrators, as unskilled labourers or sales people.

Mental health problems can affect anyone, at any level in a corporate hierarchy; this is an illness, and it is no respecter of status, wealth, skills, or authority; but it is so often a hidden illness, and for that reason we should all become better at recognising it.

Training helps; but simple awareness helps, too.

Mental ill-health hides in plain sight.

No illness should be stigmatised, but mental health problems hide in plain sight, disguised as people having moods, negative personalities or a bad day.

We all have a bad day, every now and then, and having a bad day doesn't make you mentally ill; but if you seldom have a good day, or if you bounce between exultant happiness and pits of despair, that needs to be taken more seriously. The sooner we learn to differentiate between someone having a bad day, and something that may be deeper and more serious, the better.

The sooner we recognise that we all have a responsibility to reach out to people who are struggling, the sooner we'll begin to save lives. It's too late, once they've become part of those grim suicide statistics.

The pre-pandemic figures discussed here are unlikely to have improved in the 12 months or so since C-19 entered our lives. I suspect that when we finally all return to a working environment closer to the one we had in 2019, mental health may be a bigger problem than ever.

So what? We're a company, not a mental health ward!

I'll leave you with one final thought.

Despite the knowledge that work in the construction industry seems to make you more vulnerable to mental health issues, some managers will have read this far, and will still be thinking yes, **but what's it got to do with me?**

"We're a company" these folk will say *"not a mental health ward".*

And that's true.

But just as training in working at height will help to prevent your employees ending up in an accident and emergency ward (or worse), training in mental health first aid will help to prevent them ending up in a mental health ward (or worse).

For the cynical manager, mental health issues in your workforce directly affect your profitability. They adversely affect: teamwork, leadership, safety, absenteeism, customer relationships, employee motivation and commitment, diligence, quality and even the success or otherwise of business pitches and sales operations.

And if one of your employees terminates his or her life, perhaps in a workplace incident, the negative impact on your company (not just the employee's immediate colleagues) will be significant.

It's irrational to train your employees in health and safety, but ignore the UK's biggest killer of young men. **Mates in Mind** will help you address this issue from an informed base, professionally and cost effectively.

Give them a call; 020 3510 5018 or check out their website www.matesinmind.org.

Steve Martin blogs regularly on mental health and other issues on LinkedIn.

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AIR-serv GO
Throughout the height of the pandemic the AIR-serv Service Team worked hard to support site operators who remained open as an essential service. Meanwhile the AIR-serv Development and Commercial Teams used this time to create new and exciting vending opportunities, and launch partnerships to further enhance the AIR-serv offer.

Aquarama Rollover Car Wash
AIR-serv are pleased to announce a new co-operation with Aquarama to supply and support their full range of rollover, and self-service carwash equipment throughout the UK, with new machine installations already taking place.

NEW In-car Sanitiser
In-car Sanitiser vending machine sanitises and eliminates harmful microbes and bacteria, and forms an invisible protective shield on interior surfaces. An ideal addition to any valeting location.

NEW Foaming Lance & Air Blaster
Foaming Lance is an exciting Jet wash programme which allows users to cover their vehicle in thick active foam aiding the cleaning process.
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The world's first!

GripHero launches the world's first 100% recycled plastic hand protection for forecourts

GripHero, the maker of the world's only static-safe hand protection and on-the-nozzle dispensers for fuel pumps, has announced a major product breakthrough for 2021; with immediate availability.

GripHero's green start to 2021

A first for the forecourt and hand protection sector, GripHero's new 100% recycled static-safe hand protection has been developed, to enable forecourts to significantly cut their annual carbon footprint.

With rapidly growing demand for best-practice hygiene and safety at the pumps (particularly following the coronavirus pandemic) protecting customers and the environment has become an increasingly high priority, for both motorists and forecourt operators.

At just 7.22kg of CO_2e per 10,000 protectors, GripHero's 'R100' hand protection cartridges are made entirely from 100% recycled plastics and have been independently verified to reduce the carbon footprint of forecourt hand protection by over 87% (conventional hand protection gloves produce 59kg of CO_2e per 10,000 units).

Combined with GripHero's 'single item' release dispenser mechanism, preventing blow-outs and clumping, GripHero enables forecourt owners to slash their hand protection carbon footprint by over 94%.

The equivalent of more than 600 used plastic water bottles are re-purposed, to produce one case of GripHero R100 hand protection cartridges; with each case capable of protecting the health and wellbeing of up to 8,500 motorists.

ATEX certified

By developing and using ATEX certified anti-static materials, GripHero removes all chance of fuel vapour ignition at the pump, blocking the static spark between drivers and fuel equipment. This makes GripHero the only hand protection system which is internationally permitted within the fuelling zone.

Commenting on the development of the new R100, 100% recycled material, Oli Yeo, Founder, Inventor and Managing Director of GripHero, said;

"From the very start, our goal has been to eliminate waste and to provide an alternative. This means that forecourts can avoid the hugely negative environmental impact caused by both the manufacture and use of standard gloves.

"Cutting waste through a fault-free dispenser, allowing only one item of hand protection to be withdrawn at a time, was our start-point. Today, we have completed the journey through the development of ATEX-certified hand protection, created from 100% 'open-loop' recycled plastics. This not only complies with, but far exceeds the upcoming' Single Use Plastics Directive'. The result is the world's lowest CO2 footprint for hand protection, by a huge margin.

"Now, through the use of GripHero's R100 hand protection cartridges, forecourt operators can protect their customers from bacteria, viruses, carcinogens, chemicals and foul-smelling hands; whilst protecting the environment with a near zero hand protection carbon footprint.

We think this represents a great opportunity for forecourts, to show customers how they are taking important steps to protect both motorists and the environment at the pump."

To order GripHero's new R100 hand protection cartridges, call 01837 811 035, email info@griphero.com or visit www.griphero.com

In the frame...

Our illustrious subject for this edition of 'In the Frame' is Mark Truman, Chief Revenue Officer of EdgePetrol. If you don't know Mark, sign up to EdgePetrol's regular quirky newsletter "The Weekly Wrap"

So Mark, tell us about your present role & how long you've held it

Depends who you ask! Gideon (our CEO) gave me the title when I joined EdgePetrol back in 2017 when it was just the two of us. I quickly realised, that there's an argument that everything is *my* responsibility as everything is revenue related in some way! But, these days, I've managed to hone in on sales, marketing and customer success.

How come you're in the industry, and since when?

I've been in oil for as long as I can remember, but these days petrol stations are more retail than oil. So I'd say since 2017 - when I joined EP. I'm in it thanks to my wife who, by pure chance, bumped into Gideon in a shared office space in Camden, and then told me about the business when she got home. Fate!

Your career to date

DataAnalytics sales at GlobalData (twice) and at Reed Elsevier for a couple of years. A few early stage jobs, most of which are best not talked about!

Be honest - Which role have you enjoyed most?

The first years at GlobalData were a LOT of fun. I was young and money-hungry, working on a real sales floor, with tonnes of egos who loved a big night out. However, I've enjoyed the work at EdgePetrol the most; as every day is a different milestone or a new challenge.

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

I once ate five double-patty burgers in a day. I look back on that with pride. *(I think he means it – Ed!)* Professionally, it's taking EdgePetrol from zero revenue to where we are today. Seems like only yesterday it was Gideon and I squeezing into a one-man office in Camden!

And in your spare time?

Ok, so I love pop-culture (books, films, music) but my real passion is playing Football Manager. It's the only way I can get to see Spurs win anything. I also have two amazing kids to keep me entertained, when I'm not deciding whether to play Harry Kane as a deep-lying or advanced forward.

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

Well, it's only been four years, but I'm watching the shift from 'petrol station' to 'retail hub'. It's amazing what some retailers are offering on-site now. Watching the oil companies re-enter the company owned market has been interesting too.

What do you think the future holds for the fuels industry?

That shift to 'retail hub' is only halfway through. Fuel is still a huge driver in the industry and, in spite of some unrealistic targets plucked out of the air by government, this will continue to be the case for years to come. But, the best retailers aren't doing the same thing they were doing five years ago. This is great for the future of suppliers who are thinking about what a 'retail hub' is going to look like in five-to-ten years' time.

And how are you preparing for it at EdgePetrol?

New solutions on the way...I can't say too much other than "Watch this space!"

Come on then – give us your philosophy of life

Ha! The team will like this one; "You miss 100% of the shots you don't take". It's attributed to ice hockey great Wayne Gretsky, but I feel like he stole it from somewhere.

Meet Mark and the team at www.edgepetrol.com

EDGEPetrol

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Top quality cradles

STA Technical becomes pump cradle provider of choice for Petrotec UK

Working with Petrotec and Petroassist, along with other major pump manufacturers, STA Technical delivers pump cradles that overcome the inherent problems of inconsistent quality and accuracy.

STA director, Warren Peters says;

"Historically pump cradles have come from two sources - through an assembly line factory process, or they have been fabricated by a local engineering shop using angle iron and flat bar.

"Our pump cradles are all CAD drawn, laser cut and then bent using an automated brake press to ensure millimetre accuracy every time."

Ridwan Patel, dealer account manager at Petrotec says;

"Over the past twelve months we've been trialling STA's pump cradles with our Petrotec Progress pumps, to ensure they can offer on-time delivery, precision accurate components and pump cradles that are fully equipped with nuts, bolts and U-bolts.

"Having worked with Warren for the last four years, we know STA's reputation for quality, competitive pricing and realistic lead times. They're also particularly good at fulfilling those 'out of the blue orders.' Consistently meeting our pump cradle requirements, their work has been first class and it has also had our clients commenting on their precision manufacturing."

Warren adds;

"Working collaboratively with Ridwan ensures that every pump cradle that leaves us is fit for purpose. Also, we've recently been using our experience of fabricating bespoke pump/sump cradles for Esso branded sites, to develop our first standard style stainless steel pump cradle for an installer working in a highly corrosive environment."

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AdBlue® is a colourless and pure aqueous solution composed of demineralised water (67.5%) and urea (32.5%). Soluble in water, it is a biodegradable product that is listed as non-polluting.
It is used by diesel vehicles equipped with SCR technology (Selective Catalytic Reduction) to reduce the amount of pollution (concentration of Nitrogen oxides NOx) created by a diesel engine.

What is SMART Pay?

SMART PAY is an AdBlue® storage and dispensing solution to serve passenger cars, vans, light and heavy trucks in your neighborhood. It offers a 24/7 contactless payment system with end-to-end secure transactions using debit/credit cards and mobile phone payments (loyalty and fuel card usage is under development). The small footprint design makes it possible to install the system in the smallest of places: directly on a service station island with limited space or any other location where AdBlue® can be offered.

Consumers find this type of AdBlue® filling solution cleaner and a better alternative compared to using plastic cans. This zero-waste solution could save thousands of plastic cans each year!

The system delivers a fast, clean, secure, and efficient way of filling AdBlue® with a self-pay contactless payment technology.

Partner's Benefits

- **Boost sales:** It will bring GreenChem's customers to the partner's business location.
- **No investment - No cost:** GreenChem will manage all the setup and maintenance costs. Partners will generate extra revenue and profit.
- **Requires no involvement** from the site owners. It is managed by telemetry and automatically refilled.
- **No civil works:** Plug and Fill technology.
- **Free advertising:** GreenChem will market and advertise the system location on various media channels (newspaper, magazines, mobile app, etc).
- **Profit-sharing:** Share of profit monthly.
- **Future Loyalty programs** partnered with the site product & services.
- **Zero plastic waste:** Clean and tidy forecourt.

Partner Support

- Space for system installation
- Power supply for 24/7 operation
- Promote AdBlue®

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Fill AdBlue®

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Changes to red diesel regulations:
the importance of maintaining your critical assets

A 'heads up' from Adler & Allan

From April 2022, many sectors will lose their entitlement to use red diesel; and the 80% per litre duty rate saving it has delivered for decades. Announced as part of the 2020 budget, the reforms support the UK's bold environmental commitments to improve air quality, promote greener fuels, and achieve net zero carbon emissions by 2050.

All industries, including the maritime sector, must now prepare to replace red diesel reserves with fuels such as white diesel, HVO or biodiesel, and initiate the complex sequence of tank cleaning, line flushing, and uplift to make way for onward fuel. Undoubtedly, the financial impacts of the change are significant; but with the right support, they aren't insurmountable.

Mark Griffiths, Head of Business Development at Adler and Allan, encourages operations managers to take immediate, yet considered, action and seize this unique opportunity to analyse assets, unlock efficiencies and future-proof their fuel maintenance programmes.

Plan ahead with a different perspective

Also known as gas oil, red diesel has long provided economical power for vital marine and landside equipment; from cranage and shunting vehicles to onboard lighting and refrigeration units. The leap to pricier, paraffin-free fuels now presents the maritime sector with a compliance catch-22.

How to balance environmental requirements with rising costs and the risk of operational downtime?

The answer is to approach the transfer; not as a stand-alone fuel supply switch, but as a critical first step towards a new standard of environmental accountability. Under ambitious government climate change targets, protective measures across air and water quality, biodiversity, natural resources, and waste management will continue to be enshrined in law. Now is the time to secure a valuable head start.

Turning point for the industry

The updated red diesel rules are a turning point for the industry; demanding not only a hands-on review of all your tanks and assets, but also a high-level rethink of overall efficiency. Supplementing the new directive with a ground-up portfolio survey, guided by a qualified environmental risk consultant, offers a rare chance to uncover hidden cost savings, while implementing measures to boost the resilience, lifespan, and ongoing performance of your infrastructure.

Immediate changes, long-term benefits

As a first step, an environmental expert will carry out a practical audit of your tanks to gauge their condition, potential pollution hazards, and the recommended plan for fuel uplift and fulfilment. A complete estate inspection will identify structural and functional weaknesses (linked to age, internal corrosion, and exposure to the elements) that could lead to service failures, pollution events, and punitive fines according to increasingly tough environmental regulations. A trusted partner will also discuss how improvements to your fuel management and maintenance programme can keep your framework fit for purpose.

Following mutual agreement of your ideal solution, skilled onsite technicians, trained in the use of all fuel transfer pumps, the handling of hazardous materials, and spill response procedures, will de-gas and clear tanks of residue, removing and disposing of legacy stores in line with current compliance guidelines.

Additional services will include full tank inspections to identify signs of degradation, comprehensive cleaning, and removal of red diesel dyes, to prevent penalties under new legislation. Meanwhile, tailored follow-up consultation will focus on top line business aims and your organisation's long-range environmental reduction strategy, with every element designed to prevent disruption, prolong the life of your assets and protect your company, clients, and the wider community.

Expert support for sustainable compliance

Following a government consultation, the exact effects of red diesel reforms on the industries are yet to be revealed, but prudent operators will begin the planning process now. By aligning with a commercially minded environmental specialist, it is possible to intelligently spread investment and mitigate the financial burden of building a greener business.

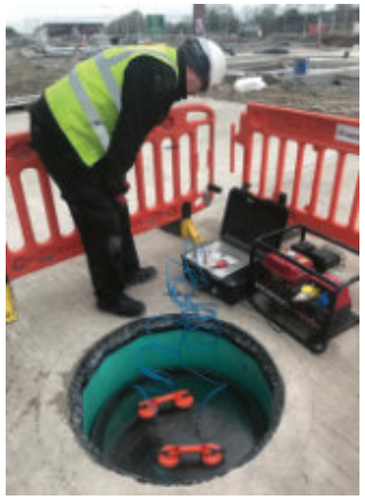
Working with an experienced professional will help you tackle the short-term task of red diesel replacement – and shape your organisation's best, most beneficial path to lasting environmental compliance.

www.adlerandallan.co.uk

The 'ATLAS' modular chamber system
from Berrys Technologies

Berrys Technologies' ATLAS (Advance Tank Lid Assembly System) MONO has been installed in over 3,500th tank compartment! Since its inception in 2006, the Chamber (now in its 2nd generation) has been by far and away, the most popular chamber system installed in the UK.

The product is installed on around 80% of new tank installations in the UK. Supermarkets, oil companies and independent dealers, enjoy the benefits that the ATLAS MONO system delivers!

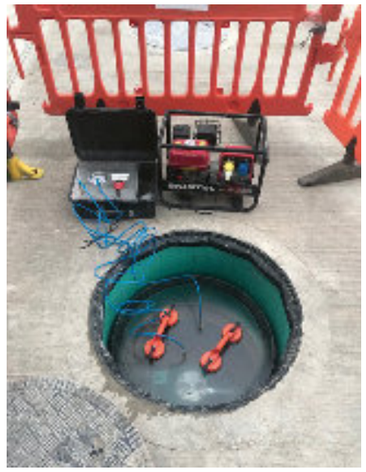


The chamber is welded directly to the tank during its manufacture. Coated in the same endoprene, it becomes an extension of the tank; benefiting from the same constructional life expectancy of 30 years. Once welded, it also eliminates the potentially troublesome leak path that comes with an upstand and bolted chamber system. With all the tank lid fittings, pipework transitions and pipe entry boots also installed at the factory, the savings on site installation time and, ultimately cost, can be considerable.

The specialist in house team work closely with architects, contractors, and the tank manufacturer Wefco, to ensure each chamber is fitted out to Berrys' layout. You send the drawing and an order, and they take care of the rest!

Suction system, pressure system, offset fill or direct fill, the ATLAS system covers all bases!

Once installed, Wefco vacuum test the system to ensure it arrives on site sealed; and their field engineers carry out a final vacuum test at the end of the project, once all gauging and monitoring works are complete. Unlike other chamber systems, all MONO components can be rectified at any point from within the chamber, giving the contractor peace of mind and freedom (and another cost saving) to backfill the



pipework from the chambers at any point, to their construction programme.

The ATLAS Mono is also available to retro fit on site to existing tanks. The Gen 2 Retro system is welded directly to the existing tank lid flange; so not only does it become an extension of the tank, it eliminates the need for a buried, future inaccessible, gasket between tank flange and new chamber/adaptor plate.

Existing sites can present many different obstacles. Berrys' team can survey your site and existing chamber set up, and ensure a seamless installation process. The Gen 2 Retro Mono can be installed on existing tanks chambers as shallow as 500mm.

The Green Pages
NEW FUELS GUIDE
SPRING 2021 • ISSUE 5

Welcome to the latest edition of our new fuels supplement

At the PEIMF, we support our members with education and help on traditional petroleum products and services and INSITE is always packed with information. Virtually all editorial contributions are provided by PEIMF members (which is a great member benefit).

'The Green Pages' is a series of regular special supplements, in which we endeavour to cover many aspects of new and alternative fuels, during the huge changes and developments in the industry.

Electric vehicle charging is in everyone's consciousness, but there is a lot more going on, for both fuelling and the infrastructure involved.

In this edition

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- Top Gear - Green Pages style!

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- The RTFA: Driving the uptake of sustainable, renewable fuels
  RTFA

Page 8
- On the buses! World's first hydrogen double deckers
- All aboard!! The first hydrogen train

To contribute to 'The Green Pages'
Contact our editor: david@peimf.com
tel: 01474 321999

Car registrations
February 2021

February

	2021	2020	% change	Mkt share - 21	Mkt share - 20
Diesel	6,751	17,362	-61.1%	13.2%	21.8%
MHEV diesel	2,715	2,000	35.8%	5.3%	2.5%
Petrol	26,152	41,211	-36.5%	51.0%	51.8%
MHEV petrol	5,182	3,036	70.7%	10.1%	3.8%
BEV	1,571	1,911	-17.8%	3.1%	2.4%
PHEV	3,137	2,013	55.8%	6.1%	2.5%
HEV	5,207	11,154	-53.3%	10.2%	14.0%
TOTAL	51,312	79,594	-35.5%		

Year to date

	YTD 2021	YTD 2020	% change	Mkt share - 21	Mkt share - 20
Diesel	17,647	46,625	-62.2%	12.5%	20.4%
MHEV diesel	11,494	5,911	94.4%	8.1%	2.6%
Petrol	71,555	130,103	-45.0%	50.6%	56.8%
MHEV petrol	14,019	7,823	79.2%	9.9%	3.4%
BEV	3,775	6,552	-42.4%	2.7%	2.9%
PHEV	9,295	7,864	18.2%	6.6%	3.4%
HEV	10,033	13,125	-23.6%	7.1%	5.7%
TOTAL	141,561	228,873	-38.1%		

BEV - Battery Electric Vehicle, PHEV - Plug-in Hybrid Electric Vehicle, HEV - Hybrid Electric Vehicle, MHEV - Mild Hybrid Electric Vehicle

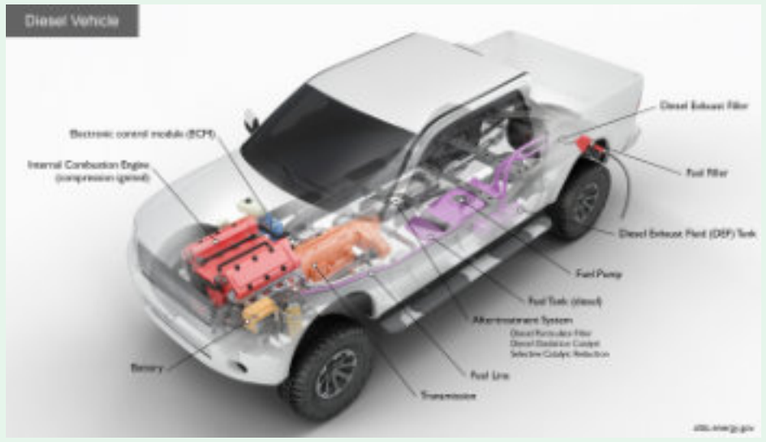
These figures are courtesy of the society of motor manufacturers and traders: www.smmt.co.uk

Top Gear – Green Pages style!

In The Green Pages, we're committed to providing information and education on the whole range of new fuelling technologies availability to the industry.

With the acceleration to the Government's 'Road to Zero', it's important to not just understand what these new fuels are, but how the vehicles actually work. So for those of you with a 'Clarkson-like' interest in how these vehicles are actually propelled, the next 3 pages will be a help to you. The shaper-eyed amongst you will notice that these are left hand drive U.S. models!

Biodiesel in diesel vehicles



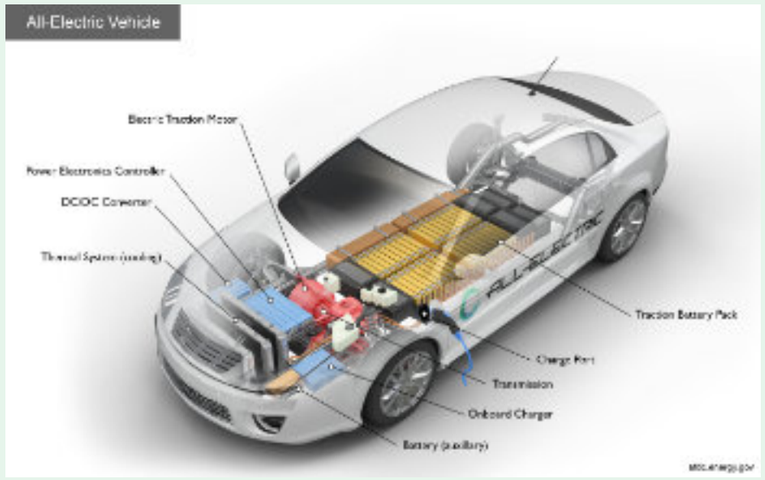
Biodiesel and conventional diesel vehicles are essentially one and the same. Although light-, medium-, and heavy-duty diesel vehicles are not technically alternative fuel vehicles, almost all are capable of running on biodiesel blends (always check before use).

Biodiesel raises the cetane number of the fuel and improves lubricity. A higher cetane number means the engine is easier to start and reduces ignition delay. Diesel engines depend on the lubricity of the fuel to prevent moving parts from wearing prematurely.

Electric vehicles (EV)

All-electric vehicles use a battery pack to store the electrical energy which powers the motor.
EV batteries are charged by plugging the vehicle in to an electric power source.

Today's EVs generally have a shorter range (per charge) than comparable conventional vehicles, but this will undoubtedly change over time. Efficiency and range of EVs varies substantially based on driving conditions, e.g extreme outside temperatures tend to reduce range, because more energy must be used to heat or cool the cabin.

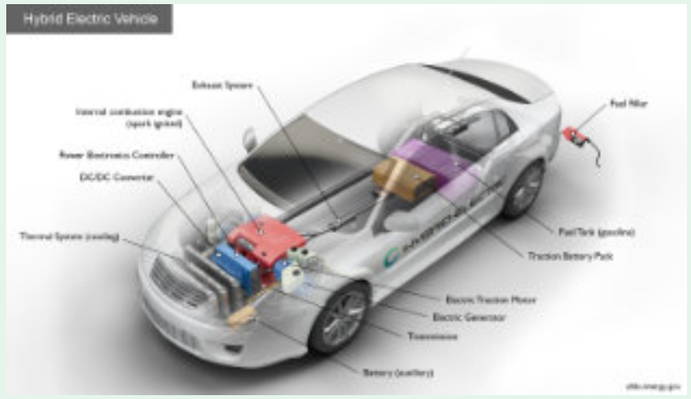


EVs are more efficient under city driving than on the motorway. City driving has more frequent stops, maximising the benefits of regenerative braking, while motorway travel typically requires more energy to overcome increased drag at higher speeds.

Hybrid electric vehicles (HEV)

Hybrids are powered by an internal combustion engine (ICE) in combination with one or more electric motors, using energy stored in batteries. HEVs combine the benefits of high fuel economy and low tailpipe emissions, with the power and range of conventional vehicles.

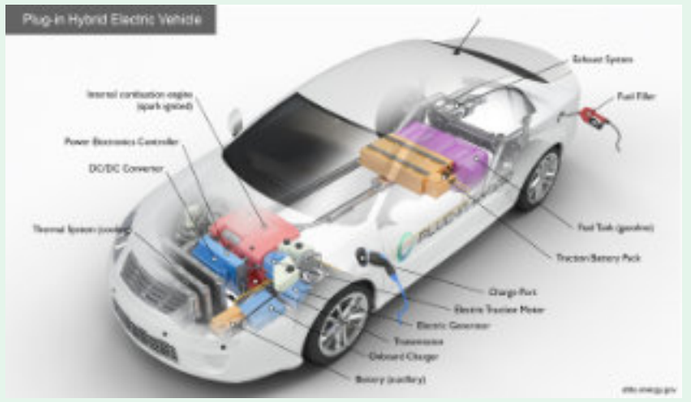
In an HEV, the extra power provided by the electric motor may allow for a smaller combustion engine. The battery can also power auxiliary loads and reduce engine idling when the vehicle is stopped. Together, these features result in better fuel economy without sacrificing performance.



The vehicle uses regenerative braking and the internal combustion engine to charge. It captures energy normally lost during braking, by using the electric motor as a generator and storing the captured energy in the battery.

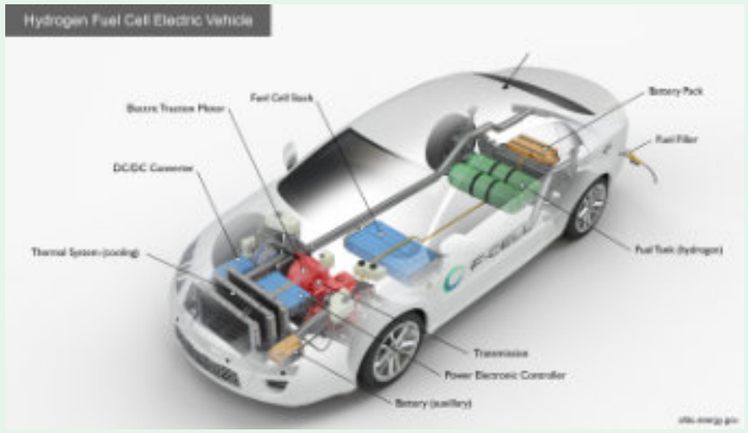
Plug-in hybrids (PHEV)

Plug-in hybrid electric vehicles use batteries to power an electric motor, as well as another fuel, such as petrol or diesel, to power an ICE. PHEVs can charge their batteries through charging equipment and/or regenerative braking. Using electricity from the grid can reduce operating costs and fuel use, relative to conventional vehicles. PHEVs may also produce lower levels of emissions, depending on the electricity source and how often the vehicle is operated in all-electric mode.



During town driving, most of a PHEV's power can come from stored electricity. PHEVs generally have larger battery packs than hybrid electric vehicles. This makes it possible to drive moderate distances using just electricity (about 15 to 60-plus miles in current models) commonly referred to as the "electric range" of the vehicle. The ICE powers the vehicle when the battery is mostly depleted, for example during rapid acceleration.

Hydrogen



Energy is stored as hydrogen in a tank on the vehicle and then converted to electricity by the fuel cell. Unlike conventional internal combustion engine vehicles, these vehicles produce no harmful tailpipe emissions, only emitting water vapour and air. They can be refuelled quickly and have a potential driving range over 300 miles.

The battery recaptures braking energy, providing extra power during short acceleration, and smooths out the power delivered from the fuel cell, with the option to idle or turn off the fuel cell during low power needs.

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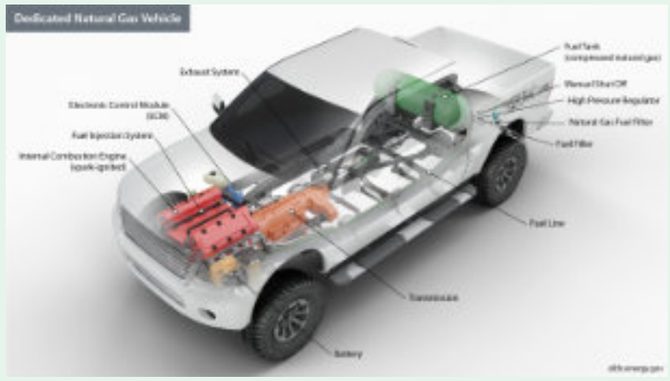
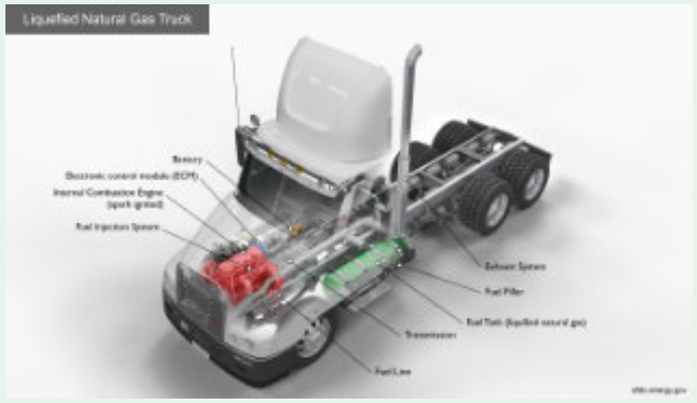
Compressed natural gas (CNG)



Natural gas powers over 20 million vehicles worldwide. It can be ideal for high-mileage, centrally-fuelled fleets, because they can provide similar fuel range support for applications not involved in long-haul routes, where fuel stations may be sparse. Plus the benefit from reduced greenhouse gas.

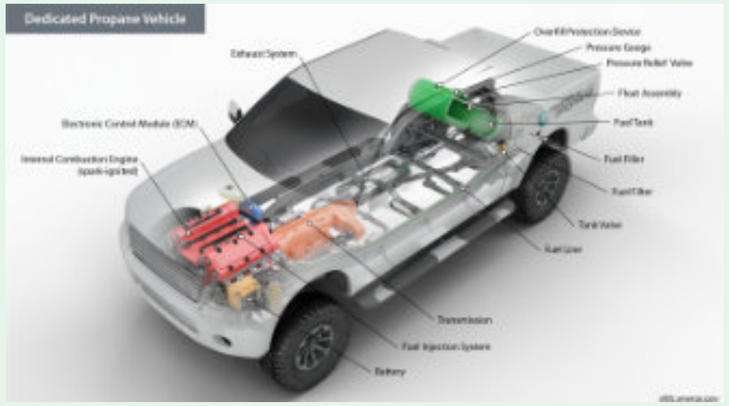
CNG vehicles operate much like petrol engines, with spark-ignited internal combustion engines. Natural gas is stored in a fuel tank, or cylinder, typically at the back of the vehicle. The CNG fuel system transfers high-pressure gas from the fuel tank through the fuel lines, where a pressure regulator reduces the pressure to a level compatible with the engine fuel injection system. Finally, the fuel is introduced into the intake manifold or combustion chamber, where it is mixed with air and then compressed and ignited by a spark plug.

Liquefied natural gas (LNG)



Heavy-duty LNG vehicles work much like petroleum-powered vehicles with a spark-ignited internal combustion engine. The natural gas is super-cooled and cryogenically stored in liquid form, usually in a tank on the side of the truck. LNG is typically a more expensive option than CNG and is most often used in heavy-duty vehicles to meet longer range requirements. Because it is a liquid, the energy density of LNG is greater than CNG, so more fuel can be stored on board the vehicle. This makes LNG well suited for Class 7 and 8 trucks traveling greater distances.

Liquefied petroleum gas (LPG)



LPG / propane (or Autogas) vehicles are available from original equipment manufacturers (OEMs) or via conversion.

Propane vehicles operate much like petrol vehicles, with spark-ignited internal combustion engines. There are two types of propane fuel-injection systems available: vapour and liquid injection.
In both types, propane is stored as a liquid in a relatively low-pressure tank, usually at the rear of the vehicle. In vapour-injected systems, liquid propane travels along a fuel line into the engine compartment where it is converted to a vapour by a regulator. Liquid propane injection engines do not vaporise the propane until it has reached the fuel injector, allowing for more precise control of the fuel delivery and improved engine performance and efficiency.

The RTFA: Driving the uptake of sustainable, renewable fuels

The PEIMF AGM in January was one of those strange 'Covid-affairs,' where the speakers are greeted with 40 or so blank cameras and muted mics, and the only voice is the poor old presenter.

But 'silver-linings' and all that! We were blessed with the involvement of Gaynor Hartnell, who is the Chief Executive of the Renewable Transport Fuel Association. The RTFA is a new organisation (born out of the Renewable Energy Association) specialising in the drive of the uptake of sustainable renewable and low carbon fuels. The voice of the UK's renewable liquid and gaseous fuel producers and suppliers.

These fuels are delivering valuable carbon savings today, and the companies that produce them will be the innovators and investors of the future. They will be making fuels for those sectors of transport that cannot ultimately be electrified, such as heavy freight, aviation and marine.

The PEIMF and the RTFA are developing a great understanding and here we introduce them to you, with a brilliant overview of the range of sustainable fuels out there.

The RTFA are calling upon Government to have greater ambition in the fight to reduce carbon emissions from transport. Time is short.

BIODIESEL

Biodiesel achieves greenhouse gas savings of 87% – 92% compared to diesel. It is made from oil and

First biodiesel produced from fatberg feedstock, mocked up to look like limited edition single malt whisky.

fat-based waste residues and oil crops. Waste-based raw feedstocks are preferable, as these give the best greenhouse gas saving and sustainability.

Standard diesel sold at forecourts contains around 7% biodiesel, and for this reason is known as B7. This fuel meets the EN590 standard for ultra low sulphur diesel. Higher blends (of 20%, 30% and even 100% can be used) and typically require some modification to the engine and fuel storage infrastructure. B100 (100% biodiesel) must comply with European Biodiesel Standard EN14214, whilst B20 and 30 must meet EN16709.

Argent tanker loading B100 for delivery to customers fuelling depot

Some bus and truck manufacturers (OEMs) do not warranty the use of higher blends in their vehicles. This may be due to the required tests not having been done, rather than genuine concerns over engine impact.

Biodiesel is produced by reacting waste oil with methanol to produce Fatty Acid Methyl Ester. Glycerine is produced as a by-product. There are 3 biodiesel manufacturers in the UK, and all are members of the RTFA. The RTFA is keen to see more fleet operators using higher biodiesel blends, as well the biodiesel content of retail fuel increased from 7 to 10%

Inside the biodiesel production facility at Stanlow

BIOETHANOL

UK produced bioethanol can achieve GHG savings of over 85%. Bioethanol is made from fermenting starch rich biomass (such as feed wheat or corn). This process produces ethanol with by-products of CO_2 (which can be sold for use in the drinks industry) and DDGS.

DDGS stands for distillers' dried grains and solubles, and is a protein-rich solid which is used as an animal feed. Feed wheat is high-starch, low-protein grain, which is unsuitable for making milling flour for human consumption. The fermentation process turns the starch to alcohol and concentrates the protein in the animal feed by product. It's a virtuous circle, and of great benefit to UK agriculture, and means that we need to import less soy-based animal feed from South America. Bioethanol can also be made from water.

The RTFA - *continued*

Nova Pangaea Technologies (UK) Ltd is developing technology for converting lignin-rich feedstocks into ethanol, along with high value chemicals.

The petrol sold on public forecourts in the UK contains around 5% bioethanol, but that should soon change. E10 (petrol with up to 10% bioethanol) is sold in many countries and the UK will follow suit this September.

Ensus UK and ABSugar make bioethanol in the UK, and Vivergo, also owned by Associated British Foods, has a plant which is currently mothballed, awaiting the introduction of E10.

BIOMETHANE (THE RENEWABLE EQUIVALENT OF NATURAL GAS)

Methane is increasingly used to fuel heavy duty vehicles in the UK. It is used in cars elsewhere (particularly in Italy) but this is not envisaged for the UK. Fossil methane, or natural gas, can achieve a GHG saving of around 15% compared to diesel, but the renewable equivalent, biomethane, can achieve savings in the region of 85% – 110%.

Biomethane achieves negative carbon emissions when produced from animal manure, as it is captured instead of being released into the atmosphere during manure storage. All biomethane supplied to vehicles in UK is dispensed from companies that are members of the RTFA. A map showing the ever-increasing number of locations where HGV drivers can fuel with gas can be found at www.gasvehiclehub.org

Gas can be used either in compressed from or liquefied, and predominantly in >40 tonne HGVs. The cost of ownership and GHG benefits are greatest on the heaviest duty cycles.

Compressed biomethane requires more storage space on the tractor, and is generally used on 2 axle tractor configurations. Compressed biomethane is stored at pressures of [250bar], whilst liquified is stored at 5 – 10 bar but requires refrigeration at around -160 Celsius.

Compressed biomethane (CBM) may be supplied directly or via mass balance. LNG will always be mass balanced. Mass balancing in this context is putting biomethane in the gas distribution grid in one location, and taking an equivalent amount of gas out in another location, but having the sustainability characteristics of the biomethane follow the contractual pathway taken by the gas. Natural gas and Biomethane both pay a fuel duty of 24.7p/Kg and VAT at 20%. This fuel duty rate is fixed to 2032, with a review in 2024.

A Volvo tractor unit fuelled by liquefied biomethane

BIOPROPANE (RENEWABLE EQUIVALENT OF LPG

LPG is a fossil fuel, and biopropane is the renewable equivalent. RTFA member Calor Gas supplies biopropane for both transport and heating. Biopropane is a by-product of the production of HVO. LPG is a mixture of propane and butane and is a by-product of natural gas and oil extraction and oil refining. It boils at a low temperature and is stored in pressurised steel vessels such as gas bottles or bulk LPG tanks. It can be used as a vehicle fuel and is particularly used in forklift trucks.

DROP IN FUELS

Any renewable or sustainable fuel that can be blended with conventional fossil fuels at any level, whilst still meeting the relevant fuel standard (be that for petrol, diesel, aviation or gaseous fuels) is known as a “drop in” fuel. The Department for Transport regards renewable liquid drop in fuels that can be blended with petrol and diesel as strategically important; encouraging their development through the Renewable Transport Fuels Obligation via the development fuels sub-target.

To qualify as development fuels, these fuels must be made from wastes or residues, but not feedstocks that typically go to make biodiesel (i.e. not made from segregated oils or fats). Drop in paraffinic diesel can also be made from non-bio sources. For example; hydrogen can be reacted with CO2, to make methane, which can then be put through the Fischer Tropsh process. Shell does this with its GtL (gas to liquid) product using natural gas, but here we are talking about the renewable version.

A typical feedstock for producing drop in liquid fuel would be residual waste. This is a mixture of biomass waste and waste plastics that cannot be recycled. The resulting fuel would be partly renewable, and partly recycled carbon fuel.

HVO (HYDRO-TREATED VEGETABLE OIL)

HVO is a drop in fuel, closely aligned to the chemical composition of diesel and with identical performance characteristics; warranty concerns are therefore not an issue. The Zemo Partnership (formerly the LowCVP) did a study on high blend biofuels, and noted that 99% of the Euro VI HDV fleet is estimated to be compatible with HVO. GHG savings are typically around 90%.

HVO is made from similar feedstocks to biodiesel, but is more expensive to produce. Although HVO is 100% renewable it pays the same full fuel duty as diesel.

HYDROGEN

The attraction of hydrogen is that it has zero tailpipe emissions, and vehicles can be refuelled quickly and have a long range. Set against this are the energy losses involved in production.

There are various different ways of producing hydrogen, and the upstream (or “well to tank”) emissions vary significantly depending on the production pathway. Renewable hydrogen can be made by electrolysing water using renewable electricity. This is the simplest form of a ‘Renewable Fuel of Non-Biological Origin’ (RFNBO). Another route for making renewable hydrogen is from syngas produced from biomass, known as biohydrogen.

Hydrogen from steam – reforming natural gas requires carbon capture and storage in order to be a low carbon proposition.

For use in transport (i.e. in fuel cells) the hydrogen has to be extremely low in moisture and very high purity (99% plus). At standard room temperature and pressure hydrogen has one third the calorific value of natural gas and half the calorific value of diesel. Pressurising and then storing hydrogen in excess of 700 bar to enable high-pressure filling is energy intensive.

RECYCLED CARBON FUELS (RCFS)

RCFs are liquid and gaseous fuels made from unrecyclable fossil fuels e.g. plastics or industrial. There is great interest in producing transport fuel from end of life tyres. As car tyres are around 40% biomass-derived, and truck tyres have twice that amount of biogenic content fuel made from them would be part renewable and part RCF.

The Department for Transport is considering whether to include these fuels within the Renewable Transport Fuel Obligation and a consultation on changes to the RTFO is due soon.

RENEWABLE AVIATION FUEL / SUSTAINABLE AVIATION FUEL

The Renewable Transport Fuel Obligation has a specific sub-target for strategically important fuels, and aviation fuel is one. Aviation fuel has stringent specification criteria and fuels must be certified in order to be used in commercial flights.

There are a number of aviation fuels derived from biomass that have been certified, and several others are in the approval process. Renewable aviation fuels can also be made from renewable hydrogen or from recycled carbon sources, such as industrial off-gases e.g. from steel production. This process involves fermenting the off gases to make ethanol, which is then synthesised into aviation fuel via A2J (alcohol to jet) technology. Renewable bioethanol sources can also be used for A2J.

For further information on all these fuels, or on the organisation, go to www.rtfa.org

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On the buses!

World's first hydrogen double deckers

Fifteen 60-seat hydrogen double-decker buses opened their doors in Aberdeen in January.

Built by Wrightbus in Northern Ireland, the buses are operated by First Bus, in a project led by Aberdeen City Council.

They are reportedly more efficient than their electric equivalents, with the refuelling of 25 kg of hydrogen taking less than 10 minutes, offering a range of 250 miles, similar to that of diesel, or additional hydrogen tanks can be installed.

Hydrogen buses emit only water and create no noise pollution. Aberdeen council says it has plans to make its own hydrogen.

In the short term a gas tanker truck would be required to deliver the hydrogen to the bus garage but, in the longer term the hydrogen could be delivered via the existing mains gas pipelines.

These buses can be suitable for both inner city or rural garages, where there is no suitable electricity grid.

This £8.3 million project has been funded by Aberdeen City Council, European Union Fuel Cells and Hydrogen Joint Undertaking, and the Scottish Government.

The city already owns hydrogen and electric vans, road sweepers, and cars through a car share scheme.

All aboard!! The first hydrogen train

The first-ever hydrogen-powered train is now running on the UK mainline. HydroFLEX, took two years of development work and more than £1 million of investment by both Porterbrook and the University of Birmingham, plus a £750,000 grant from the Department for Transport (DfT).

DfT says the technology deployed for the train will also be available by 2023 to retrofit current in-service trains to hydrogen, helping decarbonise the rail network and make journeys greener and more efficient.

The next phase of HydroFLEX will be the development of a hydrogen and battery-powered module that can be fitted underneath the train, which will allow for more space for passengers in the train's carriage.

The Transport Secretary has also unveiled plans to make Tees Valley the UK's first hydrogen transport hub. This would bring together industry and scientists to help create hundreds of green jobs, plus a £6.3 million funding for a green hydrogen refuelling station and 19 hydrogen-powered refuse vehicles in Glasgow.

ADVERTORIAL

AdBlue recirculation:
Complete recycling system from Franklin Fueling

When it comes to DEF AdBlue® Franklin Fueling Systems offers a complete system of Diesel Exhaust Fluid (DEF) compatible recirculation products. At around 12 degrees F (-11 degrees C) DEF will freeze, preventing sales and potentially damaging your piping lines.

Our recirculation system provides an energy efficient means of keeping DEF from freezing at low temperatures, with a complete lineup of premium products. With the use of an EVO™ Series Automatic Tank Gauge (ATG), temperature sensors are placed in the DEF pipelines. When the temperatures drop, the system triggers the submersible pump to recirculate the fluid, preventing it from freezing in the lines. The temperature sensor is installed into a "tee" pipework configuration which allows the sensor to come into direct contact with the DEF at all times, providing accurate temperature readings. Users have total control the recirculation system as it utilises the rules engine inside the EVO™ Series ATG.

You have the flexibility of writing your own rules for automated recirculation based on your climate, receive data on your system status, product levels, and usage, and monitor all this remotely with timely system notifications. Instead of turning on a heated pipework system at the beginning of winter and constantly running it, the temperature sensors turn on only when necessary to save you costs and energy usage.

Economical
Let's face it, heated pipework systems are expensive. Our DEF recirculation system allows you to use our APT™ brand pipework system solutions, including stainless steel fittings, rigid entry boots, and split test boots! Save big on the economical APT™ system and minimise installation time with the products you and your contractor are already familiar with using at your site. Also, with regulations constantly changing, our 1½" DEF pipework system is large enough to be used with other types should the need arise in the future. With a full-feature ATG in place, you can also take advantage of advanced features like electronic leak detection or containment monitoring of your DEF system.

When it comes to STP kits, our FE Petro® brand DEF STP comes in a pre-configured package for ease or ordering and installation. The DEF STP's output caters for both large and small applications without excessive nozzle pressure that can make the trigger hard to squeeze. The accompanying service station hardware products are composed of DEF compatible materials, including stainless steel and elastomers. Make easy connections with our DEF flex connectors and know you have support from crash protection, with our DEF shear valves. Our DEF dispenser sump has an optimised design; banded two-sump creation allows for clear separation between regulated and non-regulated liquids.

Mis-fill prevention
Finally, our complete DEF hanging hardware solution includes everything you need to safely dispense DEF and protect you and your customers from costly mis-fills. Our mis-fill option DuraDEF nozzle will prevent dispensing in non-DEF fill pipes, eliminating costly contamination. The DEF hoses feature anti-kink sleeves on both ends to prevent accelerated wear and our in-line breakaway solutions provide protection from drive-offs by sealing at both ends to prevent any fuel from being released.

Our DEF recirculation system prevents your system from freezing up, while also providing you with energy cost savings throughout the life of the system as well as upfront cost savings on equipment. We offer a one-stop-shop for all service station hardware, management, and hanging hardware needs.

www.franklinfueling.com

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Ancorra's top 10 tank cleans

Top of the Pops may have disappeared years ago, but with over 200 years' experience in tank cleaning, the team at Ancorra Environmental have compiled their 'Top Ten' memorable and unusual tank cleaning experiences.

At 10. Time to fly

Tony Mitchell : A transport company had fly ash stuck on its tanker. Fly ash is a coal combustion product, composed of the particulates driven out of coal-fired boilers. The ash had got damp in the tanker; not very good news. We saved the day! Using a heavy duty DISAB tanker, and fully trained operatives, for man entry in the tank to manually remove the residue.

At 9. Basement tanks

Jennie Riding : I would love to go back, to when people thought that putting oil tanks in basements was a good idea (often bricking them up to provide a bund). From a health and safety point of view there is so much to consider; from the escape and rescue implications of working in such a hard to reach area, to the manual handling of the demolition material, which has to be physically removed. Our management systems, accredited by the BSI for 9001, 14001 and 18001, help us to control risks, but elimination is always my preferred method wherever possible. Having the in-house ability to foam fill redundant tanks can provide an easier and cheaper solution, which we recommend whenever it is appropriate for the desired outcome of the job.

At 8. Going the extra mile

Janet Garland : Ancorra prides itself on customer service, but sometimes we have to (quite literally) go the extra mile for our customers. We have not only completed jobs within reach of John O'Groats and Land's End and everywhere in between, but also have regularly travelled to the Isle of Mann, Jersey, Guernsey and the Outer Hebrides. Such is our commitment to servicing our customers, that we now have a base in Dublin; so that we can effectively cover Northern Ireland and the Republic of Ireland too.

At 7. Paint Spray Booths - never say 'No'

Tony Mitchell : Entering a paint spray booth can feel like entering the film set of a horror movie. Often they are very large, dark enclosed rooms with a thick coating of paint on the walls and thick sludge to trudge through. Paint stalactites hang from the ceilings, casting strange shadows from the work lights. We are often called in when the manufacturer's usual contractor refuses (or fails) to clean a contaminated booth. This often leads to other jobs.

At 6. Brewer's drop

Andy Booth : In a certain brewery, entry to the tank calls for the operatives to be lowered in and suspended on a 'Bosun's chair.' This calls for a rigorous risk assessment and method statement process, including a double winch system and a professional with a head for heights. Residue was removed off the tank walls, and a food-grade standard disinfectant applied to all surfaces. The customer re-booked us for the next periodic clean.

At 5. Good chemistry

Amy Davies: The majority of our tank cleaning work involves fuel, oils or inert materials, however we have the experience and capability to handle much more complex tank cleans. A recent clean at a chemical manufacturer involved two tanks; one had contained water reactives and the other a strong hydrochloric acid. Protecting our staff and controlling the clean to prevent any adverse reaction, is imperative. Once we worked on a cyanide tank and had to ensure that the antidote (amyl nitrate) was available for immediate use in the event of an emergency. For these type of cleans we always use our most experienced operatives, with younger team members also there, so that the expertise is passed on.

At 4. When disaster strikes

Steve Davies : The memory of working at Buncefield, following the explosion and subsequent fire 13 years ago, will always be fresh in my memory. I was called in as a tank cleaning subcontractor. It was the fifth largest oil products storage facility in the UK, and the first explosion measured 2.4 on the Richter scale. I had never seen anything like it before and hope never to again. Having such experiences is a reminder of the potentially hazardous nature of the industry, and the importance of good compliance to mitigate against any risks.

At 3. Tank clean fit for a (future) King

Christopher Evans : Usually cleaning aviation fuel tanks is nothing unusual. Doing so on an RAF airbase, with fighter jets landing and taking off, makes for a pretty unusual working environment. The fact that Prince William was undertaking his helicopter training there at the time just nudged it into the totally bizarre!

At 2. Under pressure

Simon Palmer : Heavy Fuel Oil (HFO) is solid at ambient air temperature and is very difficult and costly to remove and dispose of. We utilise a steam boiler to heat the oil, making it pumpable for transfer on to a heated barrel. The oil can then be taken for processing and recovery. This option provides considerable savings for our customers. The last HFO tank job we did was on an abandoned site so we had to be fully self-sufficient, bringing our own power and water supplies to facilitate the job.

And at number 1 - *pick of the pops!* The highest standards

Trevor Evans : I often wonder if we can claim to have conducted the highest altitude tank clean in the UK! Having completed a job at the top of Snowdon, 1085 metres above sea level. The café was changing its heating systems and so required the old oil tank to be cleaned and removed. We pride ourselves on punctuality (especially important on this job as our team had to report at 8am to catch the train to the summit). The view from the top was recently voted 'Best View in Britain' but it was all in a day's work for the team at Ancorra.

www.ancorraenvironmental.co.uk

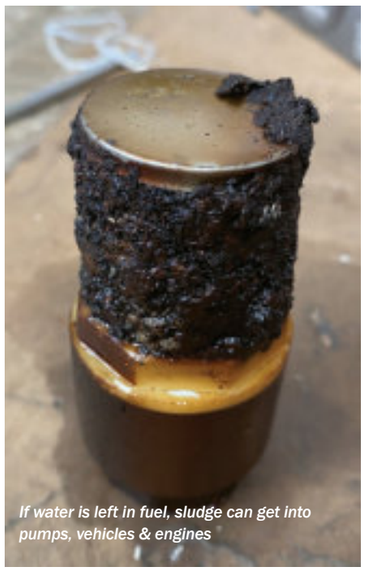
Water contamination

Water in fuel is an ongoing issue in the industry. If left untreated, it can result in unfortunate circumstances including inconvenient downtime and costly repairs. There are many products on the market that can help treat some of the symptoms of water contamination. but by removing water from the diesel fuel, you are dealing directly with the problem; and the damage it can go on to cause in engines and equipment.

But how DO you remove water from the diesel fuel and then implement preventative measures to stop the problem from happening again? Well Rob Terry, Technical Director at Centre Tank Services is here to discuss all things water contamination and how Aquafighter can do just this...

Why is water contamination a problem that's not going away?
Water contamination in fuel is primarily caused by the increasing bio content in today's diesel fuel. Whilst water can enter a storage tank via condensation and water in the atmosphere, biodiesel is hygroscopic; meaning it attracts and holds onto water. This bio content means that without action being taken, small but problematic water levels are always present in storage tanks.

What are the risks of not dealing with it?
The area between the fuel and water is the perfect environment for the growth of bacteria known as "diesel bug". If water content in fuel is left untreated, over time the bacteria will grow and feed; creating colonies that become very difficult to break up, resulting in the nasty sludge which can block filters, damage pumps, and get sucked into machinery and generators.



If water is left in fuel, sludge can get into pumps, vehicles & engines

Once contaminated fuel gets into a vehicle or machinery, power loss, spluttering and involuntary speed changes can also occur. These engine problems are signs that fuel isn't burning as it should do because of the water, or perhaps because the sludge is restricting fuel flow to the engine. Other costly side effects include corrosion of the fuel system and poor fuel efficiency.

How can water appear in fuel?
Free water is what most people know about; the visible water that you can see as a layer at the bottom of the fuel. What many aren't aware of is suspended and emulsified water.

Suspended water is bound to the fuel molecules, essentially mixed in with the fuel. As diesel becomes so full of water that it can hold no more, it can start dropping free water out to the bottom of the tank. As the water in the fuel undergoes pressure changes e.g. passing through pumps and filters, it can become completely emulsified, turning diesel from cloudy to milky. Emulsified water is therefore where there is almost no separation between the fuel molecules and water content.

How is 'Aquafighter' different?
Aquafighter is a fuel tank water absorber like no other. It is the only absorbent product on the market, which offers a complete solution to water contamination. Unlike others that are only able to remove free water later, Aquafighter also removes suspended and emulsified water bound to the fuel molecules.

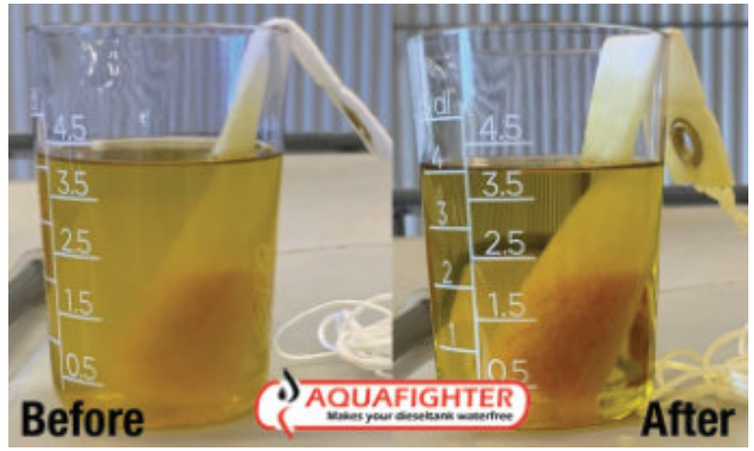
In over 7,000 lab tests, 100% efficiency was shown with Aquafighter removing water content to under 70ppm; a level which exceeds the EN590 diesel fuel standards.

Doesn't a fuel tank water filter do the job?
Whilst fuel filters do a great job of removing free water layer from the bulk tank, they aren't able to remove the emulsified water and rarely any suspended water. This is because most filter elements are a cellulose medium that, once dirty, their coalescing ability is limited.

How does Aquafighter work?
By simply placing Aquafighter into the tank through the largest opening, it will keep fuel water-free until it reaches capacity, via a three-step process. Firstly, a chemical reaction pulls the fuel apart and separates the bound water from the fuel molecules. Water is then captured inside the fabric membrane by bonding it to the special polymer. Finally, it releases clear and bright fuel back into the tank.

What are the benefits of Aquafighter?
As well as it being able to capture and remove ALL types of water contamination, there are a number of reasons why Aquafighter is such a great solution.
It works directly in the tank; so the end user simply adds this solution themselves. Aquafighter also eliminates the need for most additives, reduces tank corrosion, stops fuel gelling and bug formation and reduces filter replacement by around 60%. But ultimately, Aquafighter will leave fuel looking clear and bright as it should when first delivered.

Aquafighter almost full once having removed water from a tank and being changed



Does it work?
The efficiency of the Aquafighter has been tested over 7,000 times by two of the largest fuel producers in the world and at the renowned Saybolt Laboratories in Sweden. In every test sample, the results show that Aquafighter removes bound water to less than 70ppm.

One of the biggest fuel companies in the world used Aquafighter exclusively, to polish more than 1.7 million litres of water-logged fuel, which would have otherwise been disposed of. By using Aquafighter, the company managed to save 90% of its fuel.

Why is it different to fuel additives?
Aquafighter is designed to keep fuel water-free, preventing water contamination and diesel bug growth. Most additives usually only treat the symptoms caused by water present in the fuel, without solving the problem at the root cause.

Can Aquafighter be used on a dirty tank?
If a tank has a problem with seriously contaminated fuel with a large quantity of particles, dirt and bacteria, then Aquafighter will not be able to improve the quality of considerably spoilt diesel fuel. In the event of considerably dirty fuel, we recommend professionally cleaning the fuel and tank, and then start using Aquafighter to prevent problems with water contamination in the future.

How long will Aquafighter last?
There's no straightforward answer to this question as Aquafighter can be influenced by factors such as: how bad the fuel is contaminated, high humidity and leaks that require you to replace the tank water absorber more often. However, under normal circumstances and if the correct size model has been selected, Aquafighter will keep a tank completely water-free for at least one year. But of course, it can be retrieved at any time to check whether it appears full and needs changing.

Where can Aquafighter be used?
The range comprises five models, all of which can be used for different applications.

'The Finger' has a capacity of 200ml, used on fuel tanks up to 150l such as those found on agricultural and plant machinery.

'The Snake' has a capacity of 500ml; designed for tanks up to 500l with small openings such as boats, industrial machines and gen-set belly tanks.

'The Anaconda' has a capacity of 4l and is designed for IBCs or larger tanks up to 10,000l when there is a smaller opening.

'The Medium and Large canvas' are for use with bulk fuel storage tanks. The medium is for 500-5000l tanks and has a capacity of 2.5l, whereas the large is for tanks up to 10,000l and has a capacity of 4.5l.

The Aquafighter range starts from just £42 + VAT RRP.

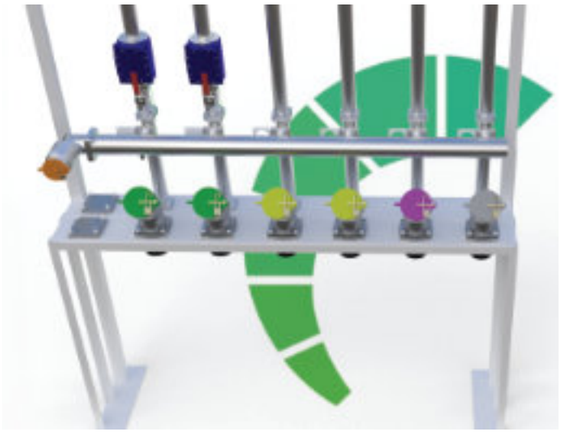
A small price for your customers to pay to save themselves potentially thousands of pounds in costly repairs, and downtime caused by water in their fuel.

To offer your customers a complete solution supplied in compact, point of sale packaging, contact Centre Tank Services - the UK agent today, for your trade pricing.

www.centretank.com
Tel: 0121 351 4445

Improved EasyFill & EasyVent
from PFS Fueltec

Modular, pre-assembled, remote fill and vent stack solutions



PEIMF member, PFS Fueltec have listened to the market and created a new, easier 100% leak-tight fill and vent frame product line.

These modular fill and vent assemblies are designed to take the hassle out of building up remote fill points and vent stacks; on petrol filling stations and other fleet refuelling systems.

They are available for sites with up to twelve tanks; plus stay compliant to UK and european vapour recovery and road tanker delivery regulations.

The system produces a slicker, easier to install, leak-tight fill and vent frame product line to simplify your remote fill and vent stack requirements. Plus, every unit is built and tested on the assembly line before being shipped.

Save money
EasyFill and EasyVent frames are up to 30% cheaper than competitive products and reduce on-site installation time by hours.

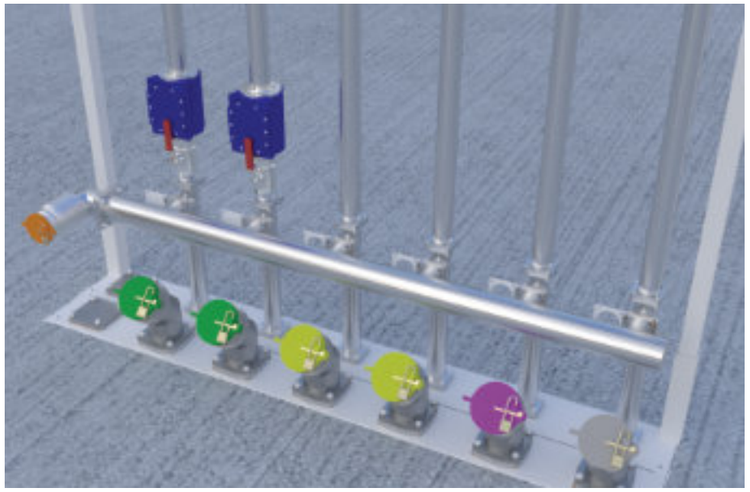
Safety first
The EasyVent frame is designed to work with all types of Stage 2 pressure/vacuum valves, including the low-level Innovent from valve Risbridger. No more work at height when testing or maintaining PV valves.

Aluminium risers
Two inch lightweight aluminium vent riser tubes are lightweight, flanged at the base and corrosion resistant. This makes installing and maintaining these easier than ever. Cranked risers, where required, are formed from a single piece of annealed and pre-bent tube.

Stainless strength
Designed to sit on the edge of the forecourt for years, our EasyVent VR2 manifolds are now made of stainless-steel so you know they'll last!

Tightness tested
EasyFill and EasyVents are built to match your site requirements and are fully pressure-tested before they leave the depot. EasyFills come complete with Fill adaptors and caps, and even VR1 vapour adaptors if required.

Pipe and go
All units come complete with PE pipe stubs in 110mm for Fills, 63mm for Vents and 90mm for VR1 connections. Compatible with all the major HDPE plastic fuel pipe systems.



Powder coated fill frames and fully galvanised elbows mean the PFS EasyFills are designed to last the lifetime of your site. PFS Fueltec supply fill adaptors, caps and padlocks as part of the assembly as well as optional VR1 adaptors and caps.

Every fill frame is pre-fitted with threaded fill adaptors and caps with padlocks, as we know that fill adaptors are frequently damaged during day-to-day wear and tear. Unlike other fill frames, adaptors are easy and cost-effective to remove and replace. Keeping your site operational has never been simpler.

If requested, they can pre-fit with Vizicap® colourised caps to suit your fuel grades.

Vapour recovery
If your fill frame is located away from the vent stack, then a vapour recovery adapter + cap can be added to your fill assembly. A 90mm PE pipe stub under the VR assembly allows fast and easy connecting of underground pipework to the VR manifold at your vent-stack.

Modular
EasyFill assmblies are designed around a core offering of 3 frames. This modular design principle helps reduce cost and complexity. Each frame has a VR port on the left hand side and a further 2, 4 or 6 fill ports.

Unused ports are blanked off if not used. For larger sites, frames can be bolted together lengthways. This allows the creation of assemblies which can house seven or more fill positions.

For full details visit:
www.pfsfueltec.com

TSG

Built Like a Tank

This well used idiom perfectly describes TSG's fuel storage and servicing solutions. '**Exceptionally well constructed**', '**built to last a lifetime**' and '**reliable**' is what our tank and tank servicing division has been doing for over 30 years. Above and below ground fuel storage from site survey and planning to installation, commissioning and maintenance TSG build them to last!

- Above & below ground tanks
- Installations, service & maintenance
- Commissioning & decommissioning
- Fuel testing, sampling & polishing
- Pipework, gauges & linings
- Tank inspections / NDT testing

Retail fuel forecourts: multiples, independents, supermarkets and fuel distributors.

Transport & infrastructure: haulage, bus, rail, air, government, utilities and construction.

Business & leisure: distribution, workplace, hotels, education and marinas.

TSG Systems TSG Charge TSG Gas
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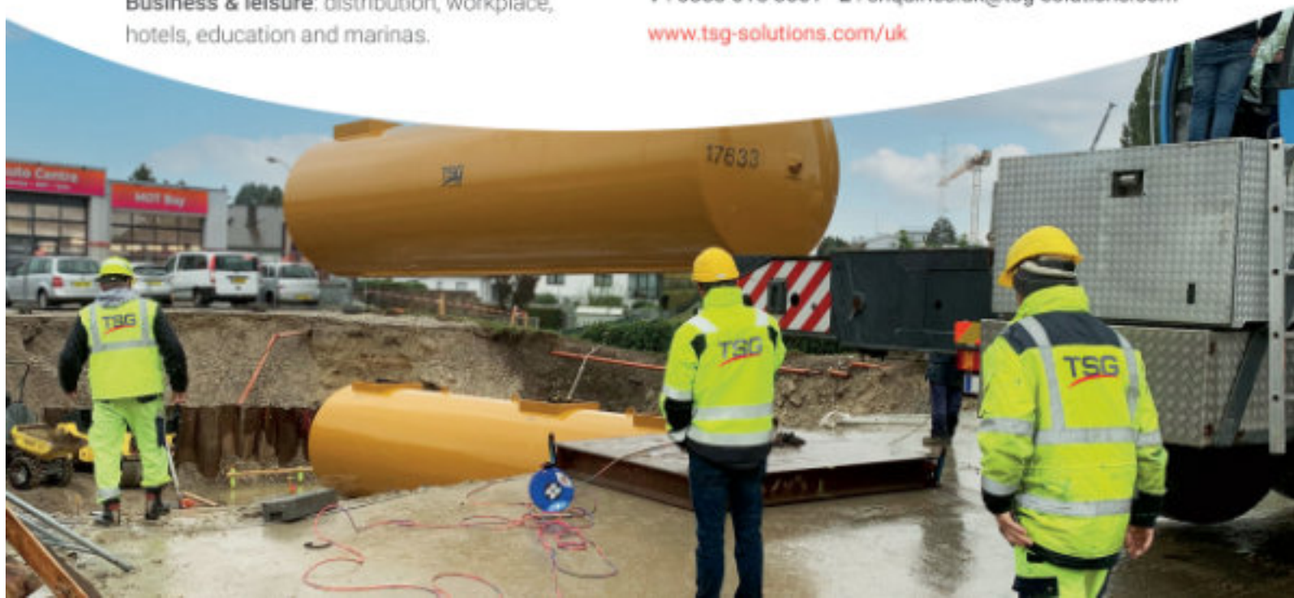


Merridale above the rest!
for above ground storage tanks

Over the last ten years, Merridale Ltd has become a major supplier of above ground, bunded storage tank systems in the UK. In a competitive market, they have managed to secure a reputation as a reliable and trustworthy provider, by developing a set of stringent design and quality standards.

With the main focus on ensuring that customers get exactly what they deserve, a package designed for long-life, compliance, and supportability, Merridale only work with fabricators they know work to the highest standards.

Sales Director Stephen Hannan said;

"Too often our sales team are presented with a competitive quotation for slightly cheaper packages, which upon closer inspection fall far short of the standards we, and our customers, would expect. Obviously, cost is a key factor, however, there are other areas that buyers should consider when approaching the marketplace for comparable costings."

A common misconception is that the tank will always hold the advertised volume. In truth, most cheaper tanks use an 'overall capacity,' which does not reflect the true working capacity.

Fuel theft!

Lower-cost tanks are usually offered in standard dimensions, to optimise steel usage and production efficiency. Merridale-sourced storage tanks are designed to have a working capacity of at least the volume required, and will often exceed this.

Tank delivery

Merridale can assist you with designing a tank to fit your working area, with side or end-mounted cabinets as needed. Unlike other tanks, these cabinets are designed with practicality in mind to ensure that any upgrades, servicing, and repair work can be carried out on equipment with ease. Generally, these bespoke features come at little extra cost.

Construction

Unfortunately, cheap tanks are also often constructed from lower gauge steel and utilise the bare minimum of bracing, leading to tank distortion, erosion, and early failure.

Stephen continues;

"Merridale's specification ensures that the tank is finished to the highest standards and meets industry standards, BS799. We even take pride in our strict standards of paint and use a full course of treatment to minimise the risk of early failure."

One of the most frustrating issues fleet operators may face is needing equipment to be serviced or replaced, only to find it has been tightly fitted inside the cabinet; leaving no room for service, replacement, or addition. Merridale provides 'walk-in' type cabinets with wider-than-standard doors, to enable easy access to cover almost every future eventuality. They also ensure that cabinets are fitted with mounting plates, cable entry points, and accessible pipework.

"Our tanks are designed for longevity; with domed or sloping roofs and under-tank channels aiding water drainage. Plus large anti-vandal cabinets to enable future servicing, repairs and upgrades can be carried out with ease."

Fuel theft is an on-going problem, with large thefts being made more often, directly from depot bulk-storage tanks. These thefts are sophisticated and involve long-term planning, resources, and a vehicle capable of transporting the large volumes being stolen.

On fuel-theft, Stephen concluded;

"With the current prevalence of thieves assaulting static fuel storage tanks, they should be built in such a manner that all pipework joints are covered and resistant to attack. This should also cover all valves, which should be installed within the protective cabinet."

"It is our experience, that most bulk thefts are occasioned due to thieves attacking exposed pipework or unscrewing vents and gauge sockets. Merridale has these covered as standard, to make unwanted access as difficult as possible."

To help combat fuel theft, Merridale's tanks can also be fitted with Merridale tank management systems. These systems include stock depletion detection, to alert you immediately, via SMS, of an unexpected drop in fuel level. This means that you will be alerted to any severe leak or theft from the tank that occurs, irrespective of where you are at the time.

GTL tank

To find out how a Merridale fuel and tank management system could benefit your company, contact Merridale on 01902 350 700 or visit www.merridale.co.uk.

VESTA

The Vehicle Energy Station of the future, from Ledbury Welding

Ledbury Welding & Engineering Ltd (LWE) are leading manufacturers of high quality above ground bunded fuel storage tanks for diesel, petrol, oil and other highly inflammable products.

Since pioneering the Totally Enclosed concept for above ground diesel storage, their services have expanded year-on-year. They have developed a team of experienced engineers, and can now provide a full turnkey package including: Installation works, tank decommissioning & refurbishment, environmental site audits (PPG2) plus a wide range of bunded tanks for hire.

Our industry is facing many challenges and the creation of alternative fuels, as well as the development of new methods of vehicle propulsion, has dictated that to survive and prosper; the car industry must follow government policy, by delivering new production models for the mass market.

VESTA – for the future

Looking at the future of the industry, are we able to confidently predict that the current blueprint for PFS design will meet the needs of the customers in the medium to long term? Continuing to follow this model may result in fixed, inflexible installations where the cost of change or decommissioning may not be 30 years + but in the region of 15 years.

Should this be the case, then the solution, is a design that not only meets the need of today's marketplace, but also has the flexibility to change, adapt and incorporate the need of vehicle propulsion and energy for the future. Having considered this, the PFS of the future may change significantly, and there will be a need to provide flexible, adaptable and cost-effective solutions.

At LWE they believe that their Modular Above Ground Units do this, by meeting the needs of the motorist and the developing

needs for petrol, diesel, EV and alternative fuels by giving the customer a Vehicle Energy Hub. Hence they have developed, with their strategic partners, VESTA Vehicle Energy Station.

VESTA delivers on the following

- Flexible for future vehicle energy needs, driven by environmental change
- Proven design that delivers the requirements for a modern fuelling station
- Ability to integrate future alternative fuels and technology, cost effectively
- The alternative solution that maintains asset value through whole life cycle

www.lweltd.co.uk/tanks/tank/vesta

LEDBURY WELDING & ENGINEERING

T: +441531 632 222
E: SALES@LWELTD.CO.UK
A: HEREFORDSHIRE, HR8 2SR, UK

VESTA

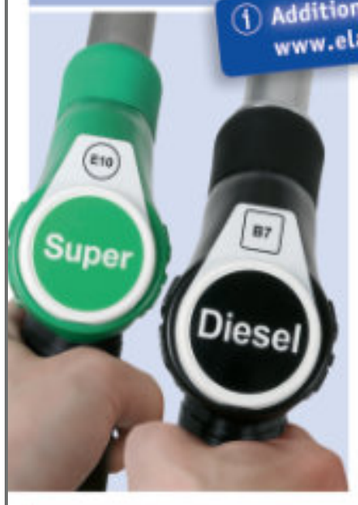
Ledbury Welding's innovative Vehicle Energy STAtion

- Flexible for future vehicle energy needs driven by environmental change.
- Proven design that delivers the requirements for a modern fuelling station.
- Ability to integrate future alternative fuels and technology cost effectively.
- Alternative solution that maintains asset value though whole life cycle.
- VESTA – Provides for Today, Tomorrow and the Future of Vehicle Energy.

www.vestation.co.uk

Fuel Grade Identification to EN 16942

Additional Information: www.elaflex.de/en/FGI



A date for your diary: by Autumn 2018, EU Directive 2014/94/ requires each dispenser, nozzle and vehicle to be clearly marked and labelled (EN 16942), showing which fuel is suitable for the vehicle.

Don't get caught out – for a simple retrofit use our **Fuel Grade Identifier (FGI) for ZVA Nozzles.** The '**EK FGI**' fits onto Product Badges 'EK145'.

ELAFLEX

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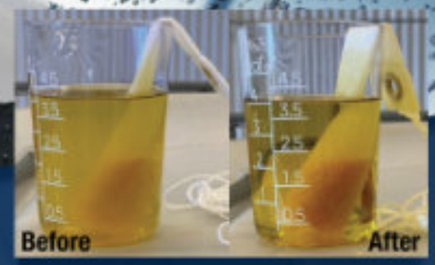
The UK Agent of... AQUAFIGHTER Makes your diesel tank waterfree

Aquafighter: The COMPLETE Solution to Water in Fuel

Unless all types of water contamination are tackled, blocked filters, pump damage and engine failure remain a risk. Aquafighter is the only absorber that removes both the suspended and emulsified water, not just the free layer at the bottom of the tank.

- Leaves fuel appearing clear and bright not cloudy
- Prevents diesel bug from forming and fuel gelling
- Simply add to the tank – no fuel removal required
- Exceeds EN590 – reduces water down to <75ppm



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A promising start to 2021 for Merkland Tank

Merkland Tank, the UK-wide provider of industrial tank cleaning and maintenance services, announces investment in state-of-the-art equipment and team expansion.

Merkland Tank is delighted to start the year, by taking delivery of two brand new Amphitec BV V-Force ADR vacuum trucks, to add to their existing specialist tanker fleet.

The company has also expanded their team, with the recent appointment of three additional operational staff members within their busy Industrial Services Division. The new equipment and personnel additions will provide much-needed extra capacity to service their growing customer base.

As a provider of specialist industrial tank services, Merkland Tank has long been recognised as a leader in their field. Clients include the Oil and Pipelines Agency, Nynas UK AB, Babcock, Amey, Balfour Beatty and Scottish Power.

Comprehensive services

Offering a comprehensive range of services including: tank cleaning, supply, installation, removal and inspection, the company provides a full 360 turnkey solution for tank cleaning and maintenance throughout the UK and across a wide range of sectors.

Managing Director, Robert Gibson said; *"Merkland Tank have a long and distinguished history with a first-class reputation for quality and customer service. Over the years, this reputation has allowed us to advance into new sectors and make significant investment in our specialist equipment, which includes a modern vacuum tanker fleet and advanced high pressure jetting units.*

MT New Tanker 2021

"We're delighted to start the year by further investing in both our equipment and our people. Merkland Tank have a trusted team of long serving, highly knowledgeable employees – some of whom have maintained the same customers' tanks for over 20 years! Our recent appointments add to our existing expertise to further allow us to help our customers remain fully compliant with current UK Oil Storage Regulations."

MT 44m Tank Clean

MT New Tank Installation

MT Marina Tank Cleaning

For further information on Merkland Tank's services, visit: www.merklandtank.co.uk or get in touch by phone or email: 0141 440 6130 / enquiries@merklandtank.co.uk

Data centre in safe hands

With PLX fuel transfer system

When tasked with specifying the fuel transfer pipework system for a Spanish data centre's emergency back-up power generator, Tavicce turned to the PLX system from Aliaxis, due to its long design life and reliability.

While they may rarely have to be used, back-up power generators are an essential feature in data centres across the world; ensuring that even in the event of a power failure, the building's computer system is still provided with power, and no data is lost. The generator's fuel pipework system also plays an essential role in this, supplying fuel from storage tanks through to the diesel generator, which in turn provides power.

Corrosion resistant

During the construction of a new data processing centre in Madrid, Tavicce, the PLX distribution partner in Spain, was tasked with specifying the fuel pipework system. Due to fuel potentially sitting in the pipework, unused, for long periods of time, it was vital that the pipework was both corrosion-resistant and would remain ready for use; for whenever the back-up generator was required.

Speaking about the project Joaquin Ortiz, Managing Director at Tavicce, said:

"Our client came to us looking for a reliable fuel transfer pipework system to be installed at the data centre. We have been distributing the PLX system from Aliaxis in Spain for many years, with applications varying from petrol stations to non-forecourt projects, including commercial sites, diesel generators and data centres.

It was a result of our comprehensive experience with PLX, combined with the system's quality, durability and comprehensive product range (including all joints, fittings and transition fittings) that led to the specification of PLX on this particular project."

The PLX pipework system from Aliaxis is designed specifically for fuel transfer applications, being suitable for use with leaded and unleaded petroleum, diesel, bio-diesel and fuel oils. Manufactured from polyethylene with an internal permeation barrier, the system offers corrosion resistance and a 30-year design life. Providing an advantage over traditional materials.

Not only does this result in cost savings, with minimal maintenance or upkeep required, but it also provides the assurance of consistent flow rates and clean, non-contaminated fuel whenever the pipework is called into use.

800 metres of PLX secondary containment pipe system; including pipes, fittings and transition fittings, were successfully installed over a three-week period, with the customer extremely happy with the end result.

For more information on the PLX fuel transfer system from Aliaxis, please visit: **www.aliaxis.co.uk/plx**

Found in Wales : *He's back!!*

Leaving no stone unturned, our intrepid reporter and outrider Jeff Young was out in the 'dark depths' of Wales *(his words)* and came across these old beauties. They are the Wayne 1800 series Model 1876- dated 1940/50s; still in situ but not functioning.

The front and rear panels opened fully, like a big door, for maintenance & repair. They were very easy to work on, with loads of room to manoeuvre. The original electric motors were usually three-phase motors driving the pumping unit, using a four-cylinder piston meter, which was a dye cast alloy with brass liners. But during the war, brass and gunmetal had other more important uses! Some had just pure alloy cylinders which wore out quickly, resulting in over-measures.

As an apprentice it was my job to repair these by dismantling, re-boring and fitting new yokes, piston leather and grinding the rotary valve in.

The register is a clock mechanism with a 20 gallon dial. They usually had swing arms and a glass globe which would be lit at night.

SMARTFLEX pipework from NUPI

The best solution for marina installations

Maja Stirrat, European Sales Manager for Nupi Industrie Italiane S.p.A. (Nupi) gives an overview of the qualities of the 'SMARTFLEX' piping system, which make it ideal for use on marina installations.

SMARTFLEX is a complete multi-layer piping system for the transfer of automotive, aviation fuels, Biofuels and hazardous fluids. A system with UL, EN, IP, Kiwa and many more recognised approvals, including all major international petroleum companies. It was conceived, developed and successfully launched onto the market in 1995 by NUPI INDUSTRIE ITALIANE S.p.A.

Through an ongoing research and development programme, and in conjunction with the major oil companies, the SMARTFLEX piping system has become the leading design system on the market today. Nupi is proud that this product has been accepted and is in use globally. SMARTFLEX has a 30-year warranty.

SMARTFLEX on marinas

Corrosion and deterioration of traditional steel piping systems can cause serious and costly problems at marina filling points. SMARTFLEX multi-layer HDPE piping can avoid these problems thanks to its durability, integrity of joints, resistance to corrosion (and chemicals) and reduced head losses; when compared to metal pipes. The rusting, pitting and scaling that commonly leads to the failure of metal pipeline systems are eliminated.

The use of coil pipe allows for longer runs; ideal for situations where the supply is some distance from the delivery points. The flexible nature of the pipe allows better "movement" with pontoon installations than you'll find with a rigid steel installation.
The components used to construct NUPI pipelines are non-metallic and are not subject to saltwater or UV corrosion. The systems and connectors and are electrostatic safe and easier and more cost-efficient to install than steel.

SMARTFLEX has been recognised as a fully approved piping system for fuel containment and delivery at marina applications by the Florida Department of Environmental Protection, amongst others.

SMARTFLEX is ideally suited for these kinds of installations, thanks to its electro-fusion welding system; which allows for greater protection and leak-tightness. The welding process is carried out at minimum voltages, in compliance with accident prevention standards. The use of product bar codes that contain welding information, allows initial checks, prevents installation errors and records every weld; providing a full welding report of the installation.

The system can also be monitored for any leaks by a simple connection to a leak detection unit. This allows for the early detection of pipe and fitting failures, whilst limiting the potential damage to the environment.

Do you need big diameter piping?

A stringent characteristic of marina filling points is the high flow rates; and sometimes to achieve them the big diameter piping is needed. SMARTFLEX double wall piping is available in a full range up to 6" (160/225mm).

It has been successfully implemented in several marinas around the world; where the flow requirements were 1000l/min, in order to satisfy the needs of fuelling super yachts.

Special approvals

NUPI's R & D department is at your service for any request; as we have not only the expertise, but also the facilities and the equipment to produce custom made products.

The SMARTFLEX piping system has been tested for special AVIO fuels such as JETA1 and AVGAS100 and has shown its suitability for airport filling point applications (qualified by such companies as TOTAL).

The SMARTFLEX piping system is available through our UK warehouse in the Midlands.

For more information, please contact Maja Stirrat, European Sales Manager at maja.stirrat@nupinet.com or visit www.nupiindustrieitaliane.com

Ideal piping for marine installations

KPS conductive piping provides fishing ports with easy-install long-term replacement for metal piping

Project Overview

The leading operator of fishing port fuelling points in Spain approached KPS for a long-term replacement for corroded metal pipework, at a selection of their ports.

Problem

The fishing boat refuelling points at these ports had been installed a number of years ago, using predominately metal pipework. These were corroding due to the salinity of the water and the environment.

Previously installed metal piping had corroded due to the salinity of the water

Due to the corrosion, the pipes had begun to break down

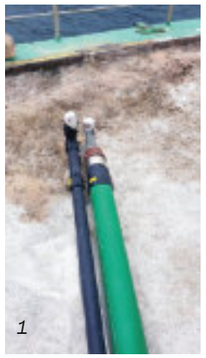
Solution

The corroded metal piping was replaced with KPS' HDPE plastic secondary contained (double wall) conductive piping, providing an easy-install, long-term fuel transfer solution, impervious to corrosion from the ever-present saltwater.

Key features of KPS piping for this project:

- Installer friendly: engineered for a quick and easy installation, KPS' double wall electrofusion fittings weld both pipe walls simultaneously
- Control and monitoring of the interstitial space between the inner and outer pipes, providing an extra layer of security
- Conductive, preventing static electricity build up from fuel flow
- Long service life

Control and monitoring of the interstitial space between the inner and outer pipes, provided an extra layer of security



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1. *KPS' double wall pipes provide control over the interstitial space between the inner and outer pipes, meaning that a leak can be located and contained quickly. Conductive pipes avoid any static electricity build up from fuel flow*
2. *The KPS piping system is engineered for fast, simple installation*

Results

These fishing ports now have a safe and reliable piping system which will continue to perform for years to come.

A long-term replacement for corroded metal pipework was needed at a number of major Spanish fishing ports

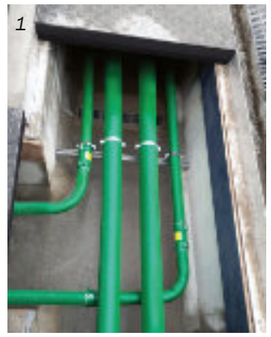
www.opwglobal.com

Backing up vital hospital generators

Fibrelite covers and KPS piping provide long-term retrofit solution for Nottingham City Hospital's backup generator supply lines

Project Overview

Hilton Bodill Construction contacted Fibrelite on behalf of their client, Nottingham City Hospital, who required a lightweight and strong modular covering system for their newly re-routed service trench, which replaced the traditional heavy concrete slabs. These protect and provide access to the hospital's backup diesel generators' supply pipes (diesel and oxygen). An easy-install, corrosion-free replacement for their previously existing steel piping was also required.



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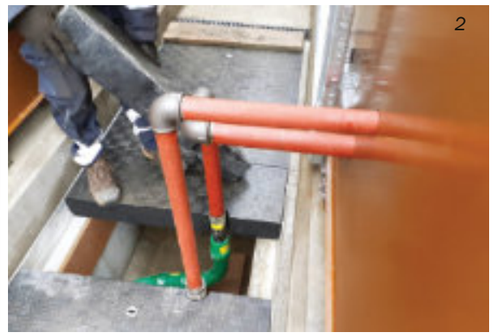

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1. Apertures were required in some covers to accommodate pipework, connecting from within the trench to above ground networks

2. Quick access to piping is vital for maintenance and inspection

Hilton Bodill Construction specified Fibrelite covers and KPS piping for Nottingham City Hospital refurbishment

Problem

The existing concrete trench access covers were heavy, requiring specialist lifting equipment to remove and replace them; a time consuming and expensive process. They also posed a risk of injury to maintenance teams (quick access to the piping is vital for maintenance and inspection). The city hospital also wanted to replace their steel pipework with a reliable plastic piping system, eliminating the potential for corrosion and subsequent fluid egress.

Key issues with the existing products:

Concrete Access Covers

- Heavy concrete access covers posed a risk of injury to maintenance teams and required specialist personnel and machinery for removal and replacement
- Concrete covers often fracture and chip
- Some covers would need to be modified to accommodate pipework, extending from within the trench to above ground

Steel Pipework

- Steel pipework can corrode over time, resulting in fluid egress (leaks)
- The traditional steel pipework was heavy and labour intensive to work with

Solution

OPW's UK technical team put together a proposal, combining lightweight Fibrelite GRP composite trench covers and KPS double wall polyethylene piping.

Key benefits of Fibrelite covers:

- No specialist machinery or personnel was required for removal and replacement
- Strength-to-weight ratio. All trench covers can be safely removed manually by two people, while strong enough to withstand sustained loading
- Bespoke aluminium frame section supplied by Fibrelite to fit exiting rebate; ensuring minimal upheaval to site works
- Bespoke Fibrelite covers modified to include apertures accommodating pipework, extending from within the trench to above ground networks
- Fibrelite covers are corrosion-resistant, so unaffected by water, underground gasses and most chemicals

Key benefits of KPS piping:

- Engineered for easy installation. Compact, installer friendly KPS fittings weld both walls of a double wall pipe simultaneously
- In-house and onsite installation training provided, standard for new clients
- Lightweight
- Corrosion free polyethylene piping
- Zero permeation (liquid/watertight

Results

The easy access solution provided by Fibrelite trench covers eliminates the need for any specialist personnel or machinery during maintenance or operation; while KPS piping provides a compact, long-term fluid transfer solution (trusted by oil companies around the globe).

Fibrelite and KPS benefits at a glance:

- Easy manual access to trench services using the ergonomically designed Fibrelite FL7 lifting handles
- Best access cover 'strength to weight' ratio available in the market today
- Bespoke, made-to-measure
- A long-term solution
- Fast, simple piping installation
- Local technical support

Fibrelite composite trench covers can be manually removed by two people, using Fibrelite's FL7 lifting handles (as seen here)

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A safe working environment

the employer's responsibility

The Health and Safety at Work Act 1973 places a significant level of responsibility on employers; to ensure their employees operate in a safe working environment, whilst following safe working practices. In recent times, the courts seem to be adopting a stance akin to strict liability – i.e. the employer has failed to provide either a safe place of work or safe working practices if an accident has occurred. So liability attaches to the employer for the injuries sustained.

Some companies will be familiar with a scenario, where an employee has been injured at work as a result of doing something on their own accord that is outside their job description or usual duties, yet their insurers have still paid an Employers Liability claim. Perhaps only a small amount of contributory negligence could even be attached to the employee.

Insurers are often accused of settling these claims too easily, but in most cases, the issue is the lack of evidence available to defend the claim. In the event of legal proceedings being issued, it's often more commercially prudent to settle the claim given the lack of evidence, rather than incur even more costs if the claim goes to court.

In this article, we share some guidance on how you can improve your claims defensibility, based on our experience as an insurance broker and the claims we have seen.

So what can you do?

One of the most important things most businesses can do to improve their defensibility, is to record the details of training being provided, the date training was carried out and a statement (or test) to confirm the employee has understood and will abide by said training.

The vast majority of businesses do carry out risk assessments on tasks & processes, but if these are not recorded and turned in to adequate documented training, then there's no evidence beyond any anecdotal information, this leaves your insurers with a defence that is not as robust as it could be. In our experience, the onus is on the employer to prove that H&S related activities took place – the claimant doesn't have to prove that it didn't.

If it's not written down, it didn't happen!

Good H&S risk management is based on assessing the risks that are present in the roles that your employees actually undertake. Your Risk Assessments & Method Statements (RAMS) need to be relevant to all of your business activities, and reviewed periodically, especially if there are changes to your business.

Having a formal induction plan for new employees (including temporary or agency staff) & relevant training applied consistently (and suitably recorded and reviewed/updated periodically) is also a very useful tool in being able to evidence that you are doing all you can, to keep your employees safe.

It's one thing to get employees to sign to say they've received PPE and know they should use it, but if this isn't being enforced at local management/team leader/supervisor level, then it diminishes the importance of such guidelines. It would therefore become difficult to argue such guidelines are mandatory in that business, if they are being largely disregarded by the employees.

Near-miss recording is another invaluable tool in being able to assess where potential claims could come from, and how to try to minimise the risk. The challenge for businesses is to create a culture where employees are comfortable in reporting these events; if they face sanctions for speaking out, it's likely they will keep quiet.

With the financial impact of the pandemic likely to be felt by many businesses in the coming months, employers could find themselves unable to retain staff in what are likely to be challenging trading conditions. It's certainly possible that some individuals, disgruntled at being let go by their former employers, could look to make spurious injury claims against them to fill the gap in their finances.

In the event that such claims are made, and if you don't have the evidence to enable your insurers to defend the claim, then don't be surprised if the claim is paid.

This note is not intended to give legal or financial advice, and, accordingly, it should not be relied upon for such. It should not be regarded as a comprehensive statement of the law and/or market practice in this area. In preparing this note we have relied on information sourced from third parties and we make no claims as to the completeness or accuracy of the information contained herein. It reflects our understanding as at 5 March 2021, but you will recognise that matters concerning COVID-19 are fast changing across the world. You should not act upon information in this note nor determine not to act, without first seeking specific legal and/or specialist advice. Our advice to our customers is as an underwriting agency and is provided subject to specific terms and conditions, the terms of which take precedence over any representations in this document. No third party to whom this is passed can rely on it. We and our officers, employees or agents shall not be responsible for any loss whatsoever arising from the recipient's reliance upon any information we provide herein and exclude liability for the content to fullest extent permitted by law. Should you require advice about your specific insurance arrangements or specific claim circumstances, please get in touch with your usual contact at Pen Underwriting.

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PEIMF supports 'Social Bite'

With Maja's help we benefit homeless charity

At our recent AGM, we held our annual 'draw' for the Frank Hare Award; this is in the name of our esteemed former editor, where the winner chooses a charity for us to donate £250 to. This year's recipient was Maja Stirrat from Nupi, who takes up this heart-warming story.

I had the pleasure to meet Alice Thompson, one of the founders of Social Bite, and was really inspired by her. She told how in 2012, aged 19, with her boyfriend started the **Social Bite** charity when a homeless man walked into their café and asked for a job. They employed him, and soon started a "pay it forward system" where customers could buy food for homeless people.

Today **Social Bite** runs cafés and restaurants in Scotland and employs 100+ people, of which 1 in 3 has struggled with homelessness. In 2016 they organised "sleep in the park," raised awareness and £8 million, which was invested in flagship projects.

In 2018 they launched the **Social Bite Village** in Edinburgh, building 11 two-bedroom prefabricated houses and a community hub in order to help homeless people get back on their feet. They created Scotland's 'Housing First' program and secured 830 flats, providing permanent homes to rough sleepers.

In 2019, over 60,000 people around the world slept in a park on a cold December night in "The World's Big Sleepover" raising awareness and funds. They closed Times Square in NYC, Trafalgar Square and involved celebrities like Will Smith and Dame Helen Mirren. Their work has been supported by princes William and Harry, plus George Clooney, Leonardo Di Caprio and many more.

I like this charity, because they not only provide immediate help to homeless people, but they actively try to help them get back on their feet. For more info and a link to donate, go to

www.social-bite.co.uk

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