

A spotlight on the vibrant north west chemicals sector

# Elements

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- *Underinsurance – are you covered?*
- *Adhesives manufacturer celebrates 120 years in business*

*...Plus, news and articles from a wide range of members*





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IN-COMPANY

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**Elements** is published by  
Chemicals Northwest  
The Innovation Centre  
Sci-Tech Daresbury  
Keckwick Lane  
Daresbury  
Warrington  
WA4 4FS

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## Designed and Printed by:



**2co Limited**  
www.2-co.com  
Email: info@2-co.com



## CIA | Chemical Industries Association

Chemicals Northwest is part of the Chemical Industries Association

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RISK & HAZARD MANAGEMENT

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## Membership

**Would your company benefit from joining an organisation that supports and promotes the chemistry-using sector in the Northwest? Do you want to understand more, and contribute to, the industry issues within the region?**

If you are a manufacturer, chemical user or offer products and services to the sector, why not join us today?

<https://www.cia.org.uk/chemicalsnorthwest/Membership/Benefits-Costs/>  
**2022 rates. (from 1st April 2022)**

Micro corporate membership	(1 - 10 employees)	£469.79
Standard corporate membership	(11-100 employees)	£817.11
Large corporate membership	(100+ employees)	£1039.86

*Our membership year runs from 1 April to 31 March. A pro-rata basis usually applies to joining at other times in the year and we'd be happy to discuss on application.*

# Hazards32

18–20 October 2022, Harrogate, UK

Join the major hazards community at *Hazards 32* to review good practice, current thinking and lessons learned in process safety and hazard management, and explore some of the challenges and opportunities in process safety today.

*Hazards 32* is an industry-focused event ideal for anyone who is active in process safety and risk management for chemical process facilities or other facilities dealing with hazardous materials.

It is an exciting chance to reconnect with fellow professionals, rebuild networks and share insight and experiences in person once again.

## Key features

- Technical presentations from industry practitioners, regulators and researchers
- Facilitated discussion time and Q&A
- Inspirational plenary speakers
- Trevor Kletz Hazards Lecture
- Exhibition hall
- Social and networking opportunities

## Speakers



Dame  
Judith Hackitt  
Trevor Kletz  
Hazards Lecture



Jasper Clark,  
Marsh Energy &  
Power  
Plenary Speaker  
Embedding Good  
Practice



Jane Lassey,  
Health and Safety  
Executive  
Plenary Speaker  
New Technologies



Peter Davidson,  
Tank Storage  
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Leadership



Michelle Roberson,  
Shell Group  
Plenary Speaker  
Energy Transition



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Chemical Industries  
Association  
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# Welcome

Dear Reader,

**W**elcome to the Summer edition of Elements magazine.

As we enter the summer period, we find ourselves living in more complicated times with members navigating energy costs at an all-time high, placing huge pressure on every day business, particularly our manufacturers, plus waves of strike action impacting on commuting and workplace travel.

At our last breakfast networking event, we welcomed Suez Water Treatment, Klinger, and FES Process Optimisation Ltd who all gave an overview of their services. If anyone would like more information, please do let me know. In the last couple of weeks, we have also welcomed ikm consulting into membership. You can learn a bit more about them at our next breakfast briefing.

Our magazine this quarter features a range of articles including a piece from Edmondson Shipping & Forwarding which highlights that despite challenges, with a flexible approach, it is possible to work around existing transportation constraints. We also look at issues of underinsurance, patent protection and enforcement, automated calibration in fine chemicals production, the value of the mid-manager as well as our member ITAC, who have just celebrated 120 years in business. Quite an achievement! We hope you enjoy reading these and other editorials.

Finally, we have set the date for our next Annual Awards Dinner, to be held on 23rd March 2023 at Hilton Deansgate. Do make a note and make sure you save the date!

Please keep an eye on our website for upcoming events, news, industry updates, careers information and the latest Elements magazine <https://www.cia.org.uk/chemicalsnorthwest/>

If there is anything else you need from us, please do not hesitate to get in touch.

**Fiona Hought** - Member Services and Events

## About us...

Chemicals Northwest is an established business network wholly owned by the Chemical Industries Association.

With around 160 members we actively promote this important regional sector and our objective is to help membership to grow through;

- **facilitating** networking events, common interest groups and interactive workshops, all aimed at covering topical industry issues.
- **supporting** projects and programmes that identify and enhance business performance and generally support continuous improvement across the sector.
- **promoting** science and engineering based skills, helping to address the region's future needs.
- **improving** the image of the industry overall, including generating a positive reputation, through communicating achievements and success.
- **contributing** to the industry's strategic voice and the national growth agenda aligned to the work of the Chemical Industries Association.
- **connecting** the community of chemistry-using businesses and the vital supply chains here in the Northwest.

Chemicals Northwest really does bring people together! It is an essential feature of successful networking strategies used by many organisations. We coordinate a range of meetings and events to enable 'face to face' networking for the benefit of all members. Every successful business networking organisation also needs effective communications channels.

As a result of gradual development over recent years, getting messages across, promoting member companies and reporting news, Chemicals Northwest has reached new levels of topicality and quality.





## RISK & HAZARD MANAGEMENT

Understanding and facilitating the effective management of risk is our core business. Our expertise covers the full range of risk assessment and management services.

*"We cannot solve our problems with the same level of thinking that created them." Albert Einstein*



Safety Risk



Business Risk



Environment Risk

Only when the risk facing an organisation is well understood can it be effectively managed. Key to the successful identification, assessment and management of risk is engagement with the right people, using the right processes at the right time. We believe we are different to many of our competitors and our approach is distinctive, we don't always walk the well-trodden path but look at each client's particular risk context and develop a tailored solution, working in partnership with our client.

We work across all aspects of risk, from Quantitative Risk Assessments and Predictive & Consequence modelling, through to the 'softer' risks which may affect an organisation's reputation.



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# Flange guards – their use and applicability in managing hazardous area zoning

**W**hat are flange guards and why are they used?

Pipe safety shields, also known as flange guards, are used in a variety of industries where their primary application is the prevention of harmful spray-outs and mist formation from failing pipe joints. For materials that are only combustible if a mist forms, there is obvious benefit in the use of a flange guard in limiting the extent of a spray and associated mist formation. This raises the question, if a flange guard avoids the spray, is the hazardous zone removed? It is worth noting that this question is not relevant for low flash point liquids which would not require a mist-forming spray to generate a flammable atmosphere.

## Can flange guards remove the need for hazardous area zoning?

Although flange guards can significantly reduce the chance and extent of a flammable zone, it is argued that they won't remove the requirement for zoning as they are not fixed measures, and might be defeated for example due to potential failure to replace them following maintenance. There is currently no guidance from the HSE or from industry bodies on the use of flange guards for controlling hazardous area classification requirements. So, we wouldn't suggest their use can result in the removal of zones. Flange guards could however be a good intermediate measure while equipment is being replaced, and are certainly a worthwhile consideration from an ALARP perspective. Rather than totally eliminating the need for hazardous area zoning, the installation of flange guards is believed to lower the frequency at which hazardous zones occur.

If we were to adopt a position where flange guards were used to argue that a hazardous area zone was removed, flange guards would need to be regarded as safety critical equipment with appropriate inspection and maintenance procedures to ensure integrity.

It is unclear whether there needs to be more regulation in terms of functionality testing and maintenance to ensure testing is carried out across the board to a consistent level so that guards are having the intended impact. After all, replacing or installing a flange guard incorrectly could be equivalent to not having it there at all, still allowing spray and mist formation. Development of standards or guidance may be necessary to achieve this. In addition to further regulation on testing, it would seem sensible for there to be standards available for the design of flange guards to ensure they are fit for purpose. Depending on the specific site, substances held and conditions under which they are handled (i.e. temperature and pressure), different flange guard specifications are available to achieve optimum protection.

## Are flange guards worth installing?

Although flange guards may not lower the HAC zone of your site or even remove the need for zoning completely, they can still be of benefit from a safety perspective. So long as a compatible design is chosen, the guards are installed correctly and suitable inspection and maintenance procedures are in place, flange guards will be effective in reducing the extent of a hazardous zone. The proven function of flange guards alongside their relatively low cost makes them a worthy investment for any site operating with relevant substances.

**Carolyn Nicholls** [enquiries@ras.ltd.uk](mailto:enquiries@ras.ltd.uk)



# Shipping and forwarding in current times - busting the myths

**W**e have faced many challenges over the past couple of years; Brexit, the ongoing Covid 19 pandemic which has wreaked havoc on trade operations and logistics, the Ukrainian crisis, and rising fuel costs.

The shipping industry is the backbone of international trade, contributing to the globalisation and development of the world. Despite the difference of opinions of experts, worldwide businesses in global trade need to adapt and restructure their business models to face any adverse consequences of de-globalisation. Those that have already done so are responding to pressures with an impressive amount of agility and resilience which will stand them in good stead for the year ahead.

Looking at the pricing graph for a shipping freight carrier, it is hard to believe one's eyes, yet the data is correct; the Drewry World Container Index – the shipping freight pricing index – has shot up by 282% in comparison to just 12 months ago. The prices have been triggered by a long-running period of intense disruption in the container shipping industry, initially provoked by the covid outbreak. A collapse in demand during the initial stages of the pandemic was followed by a period of frenzied activity, as people who were forced to stay at home rather than travel or socialise, ordered enormous quantities of consumer goods.

But this provoked a raft of problems, including acute congestion around deep seaports and a shortage of containers for new consignments, because too many of them were sitting on quaysides around the world. Just one month into 2021 there were around fifty-five ships thronging the LA and Long Beach seaports. These vessels had apparently been there for as long as two weeks. It was said by analysts that these vessels had traversed the Pacific in a shorter time than it was taking for them to be offloaded.

Midway through 2021 conditions remained the same and the scarcity of shipping containers was causing short supply of goods deliveries. More to the point, the shipping containers were in the wrong places. The larger problem, however, is that a lot of these shipping containers are not returning to Asia for refilling. Only recently have shipping companies realised how important it is that empty shipping containers are carried back

to point of origin for refilling. Fixing this disparity is still a work in progress.

The main beneficiaries of this shock to the system have been shipping lines, which are making huge profits from massive demand, amid fierce competition on container ships – the soaring cost of shipping goods around the world is fuelling rising inflation for everyone.

Ports around the world have been trying to speed things up. Rotterdam, for example, handled a record number of containers in the last few months and several ports have moved to 24/7 working patterns to try to keep up with demand.

China's Ministry of Transport reports that the main arteries have been re-opened and in the next stage of restoration they will be seeking to enhance movement. They are looking to further improve logistics as they move to further reduce restrictions.

This all paints a picture of doom and gloom for UK exporters, however, the key thing to remember is that vessels, containers, and haulage are still available along with choices provided by using an independent freight forwarder who is not tied to just one shipping line or quote offer. It is all very well if you are given a nice freight rate, but if you never get the goods onto a vessel then the quote is no good to anyone. Accurate and honest transit times are a valuable commodity, nobody wants to let their end customer down or run out of stock if awaiting raw materials to be imported.

We have encountered many instances where haulage, vessels and short transit times have been available at a rate higher than our customers have been used to. However, the movement of goods has been paramount and worth the extra cost for the peace of mind and customer satisfaction.

It is also worth assessing with your freight forwarder which is the best form of transport for your needs as there are pros and cons for each Sea Freight, Air Freight or Road Freight. It could mean that a combination of a tailored transport plan could bypass any recurring problems that you may be having.

***To get in touch, [edmondson.s.f@btconnect.com](mailto:edmondson.s.f@btconnect.com)***





# Patenting research outputs – filing strategies

Before making the leap into patent law as part of WP Thompson's chemical and life sciences team, Dr Ian Wilson worked and studied in academia for over a decade. In our continuing series, Ian investigates the key considerations for researchers in deciding where and when to file a patent application for their invention.

## First Filing

There are nearly 200 states in the world, many of which have their own unique patent application requirements. Here, we consider only the most common strategies for UK-based applicants, who may be able to file at home or abroad. Indeed, anybody can file a patent application at the UK Intellectual Property Office, regardless of nationality or residency status (except where the invention concerns national security or defence). Other countries, however, may require the invention to be developed in that country (e.g., China), or for the application to be filed by a national or resident of that country (e.g., Belgium). So, if your research team is considering filing an initial patent application outside of the UK, please consult a patent attorney to ensure you meet all national requirements before proceeding.

## Claiming Priority

As you might expect, the simplest, and often cheapest, way of seeking protection is to target a single country, which would incur a single set of fees for every stage of the process. However, applicants often want to file in many countries, or at least keep their options open. Fortunately, there are systems in place to make this easier and more cost-effective, such as the Paris Convention, of which the UK is one of 179 members. The Paris Convention sets a 12-month period in which applicants can file one or more subsequent applications based upon the initial "priority" application, retaining the filing date of that priority application. As those subsequent applications share a filing date, they cannot destroy novelty in one another, allowing applicants to pursue multiple applications simultaneously, be they in individual countries or regions, or via the World Intellectual Property Office (WIPO).

## WIPO and PCT

WIPO implements the Patent Cooperation Treaty (PCT). This grants a minimum 30-month window from the priority filing date in which to enter a patent application for prosecution in any of the 156 contracting states. A preliminary report on patentability is generated during that period, allowing applicants to assess the likelihood of success in the various

countries of interest to inform their decision. The PCT route not only affords inventors time to consider their options; it also postpones payment of national fees, which may be of use to the budget-conscious as research and development progresses. Of course, if an applicant knows exactly where they want to attain protection for their invention, they may wish to skip straight to national or regional filing.

## National or Regional Filing

Commonly, European applicants seek protection in multiple European countries, perhaps in addition to other nations. They can claim priority from an initial filing and seek protection for multiple individual applications. However, this runs the risk of, say, five countries demanding five different claim sets (potentially translated into five different languages), resulting in varied levels of protection, and five sets of fees. Instead, applicants often choose to prosecute at the regional European Patent Office (EPO), which provides a centralised system whereby a single application, in a single language (which can be English), subject to a single set of fees, leads to a single set of claims. Upon grant, this single patent can then be validated - that is, accepted - by the individual EPO member states of interest, becoming a series of independent national patents.

## Changing Times

This is where current developments complicate proceedings in Europe. The EPO currently prescribes a set time period in which to select countries of interest before the patent lapses in those states. The more countries an applicant selects, and the longer they uphold the national patents, the more expensive maintenance of a patent family becomes. In view of this, a new Unitary Patent will be introduced in late 2022/early 2023, which will be automatically enforceable as a single patent in all 17 (to date) participating states. However, much uncertainty surrounds this new system, and we will investigate this next time as this seismic shift in European patent law edges ever closer.

*To find out more, including how IP could benefit your work, please visit <https://www.wpt.co.uk> or contact Stuart Forrest at [sfo@wpt.co.uk](mailto:sfo@wpt.co.uk)*

# H<sub>2</sub>ydrogen: Past, Present & Future

Understanding hydrogen and its ability to support our transition to a zero-carbon future is upon us all. The North West of England is playing a pivotal role in reaching this goal, with leading minds from industry and academia engaged in the development of hydrogen production and distribution infrastructure under the HyNet project.

Indeed, the UK's first hydrogen hub is expected to be developed on Merseyside. Essar Oil and Progressive Energy have agreed a joint venture to produce blue hydrogen at the Stanlow Refinery in Ellesmere Port, providing transformational benefits on the region's journey towards Net Zero. With an initial production in 2025 of 3TWh per year of hydrogen, this clean energy is expected to be used to deliver fuel for both domestic and industrial purposes across the North West.

This advanced-thinking has come a long way since this element was first recognised. Here, Axiom's Principal Materials Engineer, Steve Woodward, imparts his thoughts in brief on the subject of hydrogen and its journey through time.

Hydrogen was first produced in the 15th century. However, its discovery is usually attributed to Cavendish in 1776, but it wasn't named 'hydrogen' until 1783, by Lavoisier. The first hydrogen-related component failure was documented in 1875 when it was reported that the fracture surface of an iron wire '*frothed when placed on the tongue*'; the drawn wire having previously been descaled in sulphuric acid.

Despite it being known about for nearly 150 years, hydrogen cracking continues to be one of the most common failure mechanisms. However, the art of licking of fracture surfaces is no longer practiced, with fractographic examinations having been superseded now by optical & scanning electron microscopy,

and other more sophisticated metallographic and analysis techniques.

Press articles focus more on 'The Hydrogen Economy' rather than damage mechanisms, describing ways in which hydrogen will save us from ourselves by fuelling everything from cars to ocean liners, whilst at the same time helping us achieve 'Net Zero,' and thus, narrowly avoiding a visit by Keanu Reeves and his robotic accomplice, GORT.

## Manufacturing Hydrogen Like There's no Tomorrow!

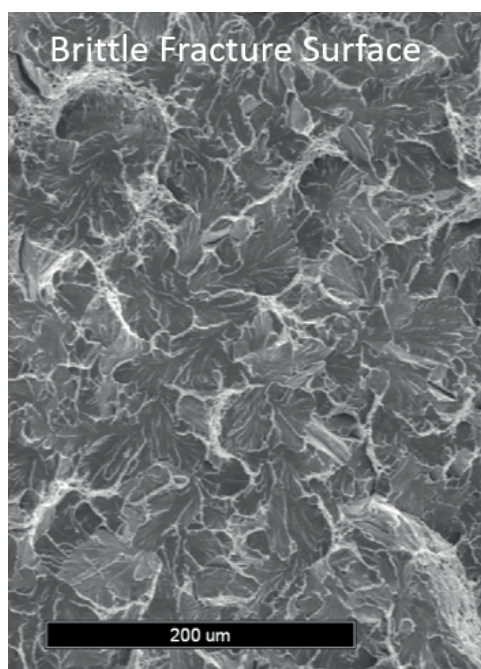
Our aspirations to rapidly expand the hydrogen economy are evident by the vast swathe of installations across Europe, where you will find projects with appellations that invoke both optimism and sustainability, such as 'Green Octopus' and 'Blue Dolphin.' Obvious by its absence perhaps is a Hindenburg project! This is a poignant reminder that we should pay heed to the hazards involved. As hydrogen usage filters more into the industrial and public domain, greater will be the risk of component failure, fire, explosion, and casualties. Hydrogen is odourless, and burns with an almost invisible flame, so, design, fabrication and transport considerations must be commensurate with these hazards.

Axiom Engineering Associates Ltd possesses in-depth hydrogen sector skills and knowledge and is ideally-placed to advise on mechanical design,

process safety and materials engineering. With additional blue hydrogen production already planned in key Chemical hubs of Teesside, Humberside and Grangemouth, Axiom is ready and able to step up as an experienced industry partner, who can deliver the localised expertise needed to progress these initiatives.

With the production of green hydrogen being the ultimate goal, it is blue hydrogen, the affordable option, that is enabling the world to take a leap forward towards decarbonisation.

**Steve Woodward**  
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# Is centralised European patent protection and enforcement coming at last?

The answer is probably! After years of uncertainty, both the Unitary Patent (UP) and the Unified Patent Court (UPC) could be live from as early as October 2022. These new systems will centralise patent protection and enforcement within many EU countries.

The possibility of centralised patent protection and enforcement might make the European (EP) patent system more attractive to some. Moreover, the new systems will impact all existing granted EP patents and pending EP applications, such that patent proprietors will need to make strategic decisions in relation to their EP patent portfolio.

## The Unitary Patent

Currently patents granted by the European Patent Office (EPO) must be validated in all of the countries in which the patent proprietor wants to obtain patents. Although the patents are granted centrally by the EPO, the validation procedure yields a number of individual patents in the countries of interest. These individual patents must then be enforced and/or invalidated individually at the national courts.

The UP will, for the first time, offer patent proprietors the option to have a single patent covering multiple EU member states (17 at the time of writing, likely to be more in the future) as an alternative to the current validation route in different countries (which will continue). Some key features of the UP are:

- provides protection in Austria, Belgium, Bulgaria, Denmark, Estonia, Finland, France, Germany, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Portugal, Slovenia, and Sweden (at the time of writing)
- requires payment of a single renewal fee
- must meet new translation requirements
- falls under the jurisdiction of the UPC
- requires limitation, transfer, revocation, or lapse in all UP member states

## Is a UP an option?

To file a request for a UP, the EP patent must:

- have the same claims for each UP member state; and
- have and retain designations for all UP member states

## Requirements and timing of UP request

A request for a UP must be filed within one month of the date of grant of an EP patent. During a transition period, the patent proprietor will be required to file appropriate translations. For example if the patent is in English, a translation into any other EU language will be required.

For currently pending EP patent applications where a UP is desired upon grant, there are ways to delay grant in order to keep the option of a UP open.

## Jurisdiction of the UPC

The UPC is a new centralised court through which:

- a patent proprietor can enforce their EP patent against an infringer; and
- a third party can seek central revocation of an EP patent

Decisions by the UPC will be effective in all UPC member states. Infringement and revocation decisions for non-UPC countries (such as the UK, Spain, Norway, and Switzerland) will continue to be made by the national courts.

The UPC brings unknown opportunities and risks and so there will be a transitional period of at least seven years to provide better certainty for users.

## Transitional Period

During transition, the national courts of UPC member states will also have jurisdiction over EP patents which are effective in these countries. A patent proprietor will be able to choose between centralised patent enforcement before the UPC or enforcement in individual national courts. Similarly, a third party can choose whether to revoke a patent before the UPC or a national court.

During transition, a patent proprietor can also request an opt out to remove their EP patents from the jurisdiction of the UPC. The patent proprietor can withdraw this request at a later stage, for example, if they wish to initiate a pan-European infringement action. The period for requesting an opt out may begin as early as July 2022 and so it is advisable to begin preparing now.

Ownership may need to be verified before requesting an opt out because the true owner(s) must file the request.

There are numerous factors to consider when deciding whether to request a UP and whether to opt out existing EP patents from the jurisdiction of the UPC. Different decisions may be appropriate for different patents in a portfolio.

***For more information on the UP and the UPC, contact  
Kate Hickinson, Partner, Appleyard Lees.***

# Adhesives manufacturer celebrates 120 years in business

ITAC Limited has designed and manufactured high performance adhesives and coatings critical to countless end use applications since 1902.

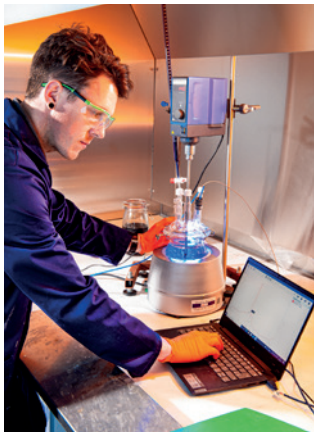


2022 marks the 120th year since John Marcus founded ITAC Limited. The beginning of ITAC started when John discovered that tyre scrapings dissolved in solvent made an excellent rubber adhesive, which when painted onto the outside carcass of a tyre provided an ideal priming coat on which tyre thread could be bonded.

He had the full backing of his wife, Miriam, who endured the physical strain of manually transporting the tyres for processing before valiantly returning them to the client once treated! It was this kind of grit and determination that set the tone for ITAC to become one of the UK's leading producers of high-performance adhesives and coatings despite two world wars, six recessions, and a devastating fire which brought the factory to the ground in 1988.



Image of Fire Damage



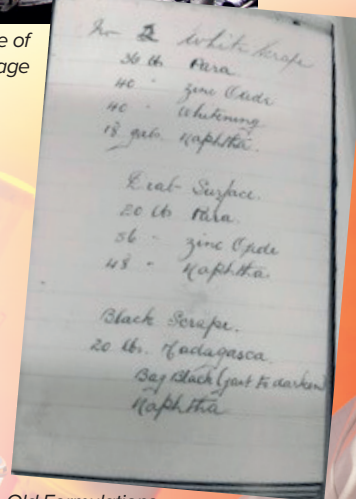
In 1954 the company expanded, and Polyurethane technologies were introduced to the business. ITAC mixed Polyurethane granules with solvent and manufactured a coating which when applied to fabric and dried, produced a tack free film with waterproof properties. The textile clothing industry in Manchester and surrounding areas at the time was thriving and demand for

ITAC's product was high. Therefore, the business invested in the mixing plant, machinery, R & D, and manpower to grow its performance adhesives and coatings portfolio to include a wide variety of properties. These included heat, UV, and chemical resistance, and varying tack, grab, and peel strengths to name a few. From here onward, ITAC's value proposition provided manufacturers with the ability to customise their products; something that was, and still is, a key component for market differentiation and competition. This strengthened ITAC's position and promoted the company's growth both as an adhesives and coatings manufacturer, and formulation specialist.

In 2020, ITAC was acquired by their parent company HD Sharman, and is still the manufacturing arm of the UK's market leading commercial roof protective coatings system. However, ITAC's primary specialism is in the formulation and production of paintable coatings and sealants, spreadable adhesives, specialist fabric coatings, and film coatings within a wide range of sectors. Continuous developments in advanced materials, manufacturing methods, and customer preferences place great emphasis on research & development and continuous improvement. ITAC's Managing Director, Steve Farnworth comments:

*"These are very exciting times for ITAC. Our projects pipeline continues to grow, not only in quantity, but also in breadth of application. This is testimony to our commitment to research and development, the diverse nature of our value proposition, and our ability to align the chemistry with the application. Watch this space over the coming months and years!"*

**[info@itac.uk.com](mailto:info@itac.uk.com)**  
**[itacadhesives.co.uk/](http://itacadhesives.co.uk/)**



Old Formulations Book

Images: Adrian Waine,  
Photography for Industry



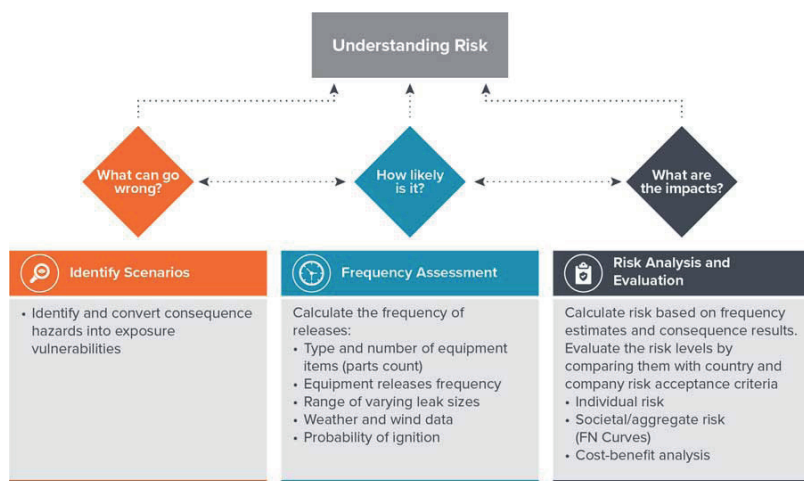
# Occupied building risk assessments: risk-based solutions and benefits

There are many approaches to Occupied Building Risk Assessments (OBRA) which ultimately fall under two categories: Consequence or Risk-based. A risk-based approach to facility siting, which considers the frequency of scenarios, can provide the greatest understanding of on-site risks, and enables the most cost-effective resolution of facility siting issues.

## What is a Quantitative Risk Assessment?

A Quantitative Risk Assessment (QRA) is a systematic approach to calculating risk. It provides a clear, quantifiable understanding of potential risk exposure to personnel, assets, the environment, and your business. In addition, a QRA evaluates the validity of quantitative results by identifying critical assumptions and risk-driving elements. A QRA involves predicting the consequences of a hazard and the frequency at which the threat may occur. These aspects are then combined to obtain numerical values for fatality risk.

QRA studies are invaluable for production and processing facilities, high-pressure pipelines and storage and importation sites, including Liquefied Natural Gas (LNG). Utilizing a risk-based approach for facility siting improves decision-making by highlighting scenarios that contribute most to your overall risk. This approach ensures you meet acceptable individual, operational and environmental criteria demonstrating that risk is As Low As Reasonably Practicable (ALARP).



## Implementing QRA: Going Beyond Software

When it comes to conducting QRAs, there are various commercial and private software tools. While these tools can identify hazards, quantify exposure, and calculate risk, this is often where their capabilities stop, resulting in an unclear path forward. While you may better understand your hazard risk, the question of what to do next is not always apparent.

A QRA is not just about having a software tool and running complex multivariate analysis. You need practical experience in deriving points of action from the QRA so that you can properly manage your operational risk. The QRA process

should identify the hazard source so you can develop emergency response plans, adjust occupancy retrofit structures, locate new permanent and temporary buildings, and install automated detection systems.

## The Benefits of QRA

### Controlling Risk Sources

One large benefit of a QRA is that it identifies the controlling risk sources. Since scenarios are developed across the process, risk results are ranked by scenario to indicate which processes provide the highest risk and are good candidates for risk reduction via process controls and hazard mitigation.

### Building Occupancy

Building occupancy has a direct impact on calculated risks. The most hours worked by any individual determines the time fraction used for individual risks. Therefore, reducing the time spent in the building directly reduces the individual risk. Over a week, the total number of people in the building impacts the aggregate risk. QRA requires a company to have quantitative risk criteria for individual and aggregate risk. Quantitative criteria development requires understanding the different risk criteria, the best practices for developing the criteria and the industry risk criteria precedents.

Interpreting the risk results when compared to the criteria is often a point of confusion. Individual risk is straightforward since most companies define a maximum criteria value above which risk reduction is required. Aggregate risk illustrated as FN curves are more complex, consisting of an intolerable upper region, an ALARP middle region and a broadly acceptable lower region.

Companies must also decide how current to keep their risk studies. COMAH defines a 5-year revalidation cycle in the UK. It is not reasonable or practical to update the QRA for every process change; however, some level of risk impact should be performed for significant process unit changes or the addition of new occupied buildings.

## How Can we help?

ABS Group is uniquely positioned based on experience to provide clients with OBRAs using risk-based methods. Risk-based OBRAs offer a more rigorous study of potential significant accident hazards. Working with industry experts like us provides easy solutions to the complex

issues surrounding QRAs.

Evaluating impacts and doing cost-benefit are usually the limits for most consultants. We offer a solution-focused approach, with the QRA being the starting point in the journey toward safer operations. Risk ranking and prioritization, mitigation planning, cost-benefit studies, design, and implementation planning, allow us to provide a turnkey solution for the facility siting lifecycle.

**Dan Humphreys, ABS Group**  
[enquiriesuk@abs-group.com](mailto:enquiriesuk@abs-group.com)

# Human Factors in Health and Safety

## Modular training for the process industries

Online and face-to-face courses available

Would you like to develop your understanding of human factors in the chemical process industries?

Are you looking for practical guidance, tools and approaches to help you manage human factors effectively at your organisation?

Register for *Human Factors in Health and Safety* and take your human factors understanding to the next level.

### What's available?

*Human Factors in Health and Safety* consists of four modules:

- Managing Human Factors
- Managing Human Failure
- Strengthening Organisational Performance
- Human Factors in Design

Complete individual modules or all four depending on your training needs.

*"Human Factors in Health and Safety has given me the confidence to lead the human factors agenda at a top tier COMAH site."*

Ian Taylor,  
SABIC UK Petrochemicals

*"Human Factors in Health and Safety is an excellent learning opportunity and an important addition to the health and safety toolbox."*

Ron Ramshaw,  
Interconnector, UK

Find out more: [www.icheme.org/human-factors](http://www.icheme.org/human-factors)

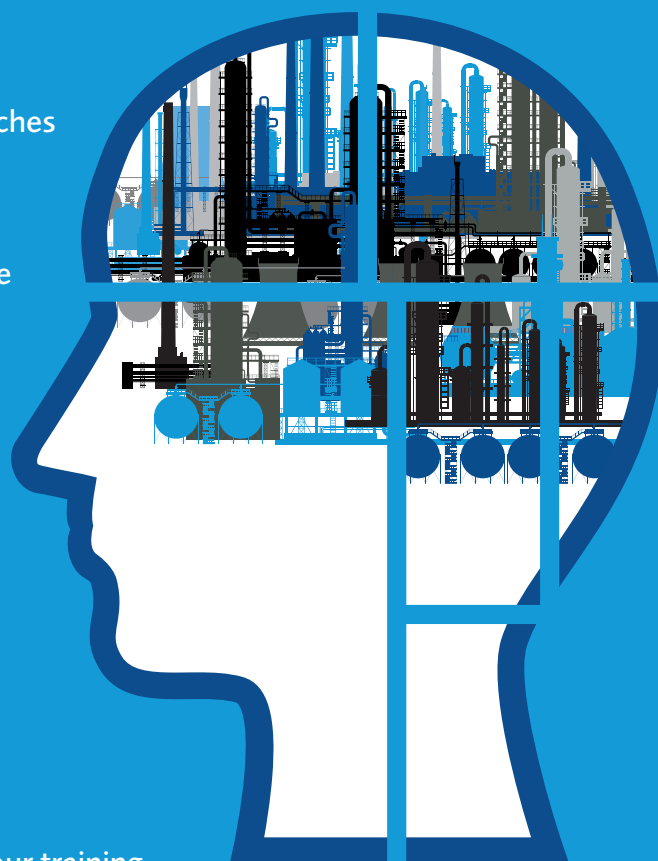


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# The value of the mid-manager

Over the years hands-on mid-level managers, often known as 'doers,' have had their fair share of bad press.

But being a 'doer,' or having doers in your workforce that relish multiple day to day demands, simply getting on with things, is something that should be encouraged if we are to get UK GDP back on track.

## Are you a doer?

You will know if you are a doer by looking at the style of work that suits your skills, expertise, and own personal job satisfaction. Although most people would not appreciate being openly termed a doer, it is precisely these skills that companies need right now to really drive growth as we put the pandemic firmly behind us.

In recent times there have been many articles with conflicting views about the worth of mid-managers but even since the 1990s companies striving to be lean have cut out tiers of mid-management in an effort to reduce costs and streamline processes.

But this is not always a good thing and here's why

- Well-developed mid managers bring stability, professional 'maturity' of attitude, leadership and development qualities and enable succession planning to take place internally.
- We have seen the removal of many mid-managers leading to loss of operational control, increased 'fire-fighting' and lower quality standards.
- Mid-manage roles are not for the faint-hearted – we have seen a shortage of functionally-skilled, high calibre people managers that can demonstrate that unflinching determination to do a great job.
- During Covid business critical decisions had to be made quickly by agile Boards, investors of large corporates, SMEs, and entrepreneurial start-ups alike which may have by-passed middle manager's input, raising a question by some again about the need for mid managers at all. However, in our role as search consultants, we have seen that market demand is proving the reverse of this. Mid managers have played an immense part in Covid in a different way playing to their strengths. They have been fully relied on (and still are) to 'get on with it' and really act with autonomy, fully utilising their own expertise often with minimal higher management support.

## The resurgence of middle management

Mid managers act as the conduit and often translator between their team and the practical realities they are dealing with and managing the expectations and insight of the higher Board. A good mid manager will be flexible, patient and work with the constant changes necessary to get the job done, balancing often extreme diverse demands on their time.

Treat your mid managers well if you value them and develop your internal talent as a succession pipeline.

In the current market, if you fail on this basic objective, you will lose good people. Before you make longer term, decisions be sure to listen to your mid-managers as they may have a helpful contribution on culture or closer insight of the day to day operation than those not near the coalface.

If you don't, be assured someone else will be trying to attract them and use their experience and emotional intelligence. It will be harder for you to replace someone at the current time, and you stand to lose established, all-round useful skills to your company, and the underlying intrinsic 'added-value' they offer.

In the last twelve months we have worked with an increasing number of companies that have needed to rebuild their mid-management expertise and relaunch internal STEM programs in an urgent effort to regain their momentum.

We are naturally pleased to be able to provide this support as mid management recruitment is a central part of our business model - but we would advise not to recruit due to knee-jerk reactions. Take time now to consider your own internal structure and dynamics within your team, ensuring you think about plans not just for this year but for three years and beyond.



***Doers are needed below  
C-suite to secure growth  
out of Covid***

***anita.caldwell@rmg-uk.com***

# How automated calibration changes the game in the fine chemicals industry

The fine chemicals industry typically relies on batch production of small volumes of high-value products. While process efficiency and waste minimization are key to remaining competitive, safety remains the number one priority – and digitalization offers potential solutions to all of these challenges.

One promising area for the application of digital solutions is automated calibration, which cuts down the number of steps needed compared with traditional, manual paper-based processes.

In a traditional process, a work order is printed out, a technician looks up the correct instrument, downloads the needed information, visits the plant to perform the calibration, stores the results, and then prints and signs a paper certificate. If results need to be entered into a management system, this is also done manually.

In an automated system, this process looks very different. Work orders are created in the central management system instead of printed, all the needed info is automatically downloaded to the calibrator, and the calibration results are transmitted in digital format back into the central management system. This creates an error and tamper-proof digital record of the calibration.

## The benefits of automated calibration

Our automated calibration solution is a combination of hardware, software, and expertise that brings a wide range of benefits to the fine chemicals industry:

- In addition to supporting safety by ensuring that all instruments are calibrated correctly, automation saves time by cutting the number of calibration steps from seven or more down to just four. This also speeds up the setup process for new batch production, resulting in faster ramp-up and cost-efficiency benefits.
- Automation ensures data integrity through automatic electronic data storage and transfer, removing the possibility of human error when transferring calibration results from calibrators back to the central management system.
- The risk of human error is reduced, and less training is needed as the system recommends which calibrator to use and the calibrators themselves provide step-by-step guidance for users.
- Querying centrally stored digital records is much easier than hunting for information hidden away in siloed paper binders and provides a clear audit trail.
- Digitalization enables data analysis and analytics. This not only improves visibility into the processes at a given plant, but it also helps to identify the most appropriate intervals for conducting critical calibrations.
- Data from automated calibrations can be integrated with ERP systems, helping management to understand what is going on and enabling them to make more informed decisions.

## Embracing change in processes

Harnessing the full benefits of digitalization requires cultural change and integrating new processes. It is not sufficient to simply purchase new calibration equipment or calibration software and assume that this will do the job. Instead, companies should analyse every step of their calibration process and, with the help of a suitable solution and expertise, find ways to improve it. To ensure a good return on investment, the relevant people need to be onboarded and trained to make sure they know how to use the new system and are motivated to adopt it in their daily work.

We have decades of experience working with the chemicals industry to roll out automated calibration solutions and can support customers with every step of this process.

**Download our whitepaper to learn more:**  
<https://resources.beamex.com/lp-improve-safety-and-ensure-compliance-in-the-fine-chemicals-industry>. Contact: [tony.moore@beamex.com](mailto:tony.moore@beamex.com)





# Say goodbye to fluid contamination with the first solids handling magnetically driven centrifugal pump

Handling toxic and hazardous fluids with any kind of particulates has always been a challenge for the industry. With the two main pump types both offering advantages and disadvantages, it is about time we levelled the playing field.

Centrifugal pumps, a very popular choice of pump for many applications, are known to be robust and long-lasting but face problems when handling fluids with any kind of solid fines.

Positive displacement pumps move solid-laden fluids better, but they have higher maintenance requirements and are not suitable for hazardous or toxic vapours.

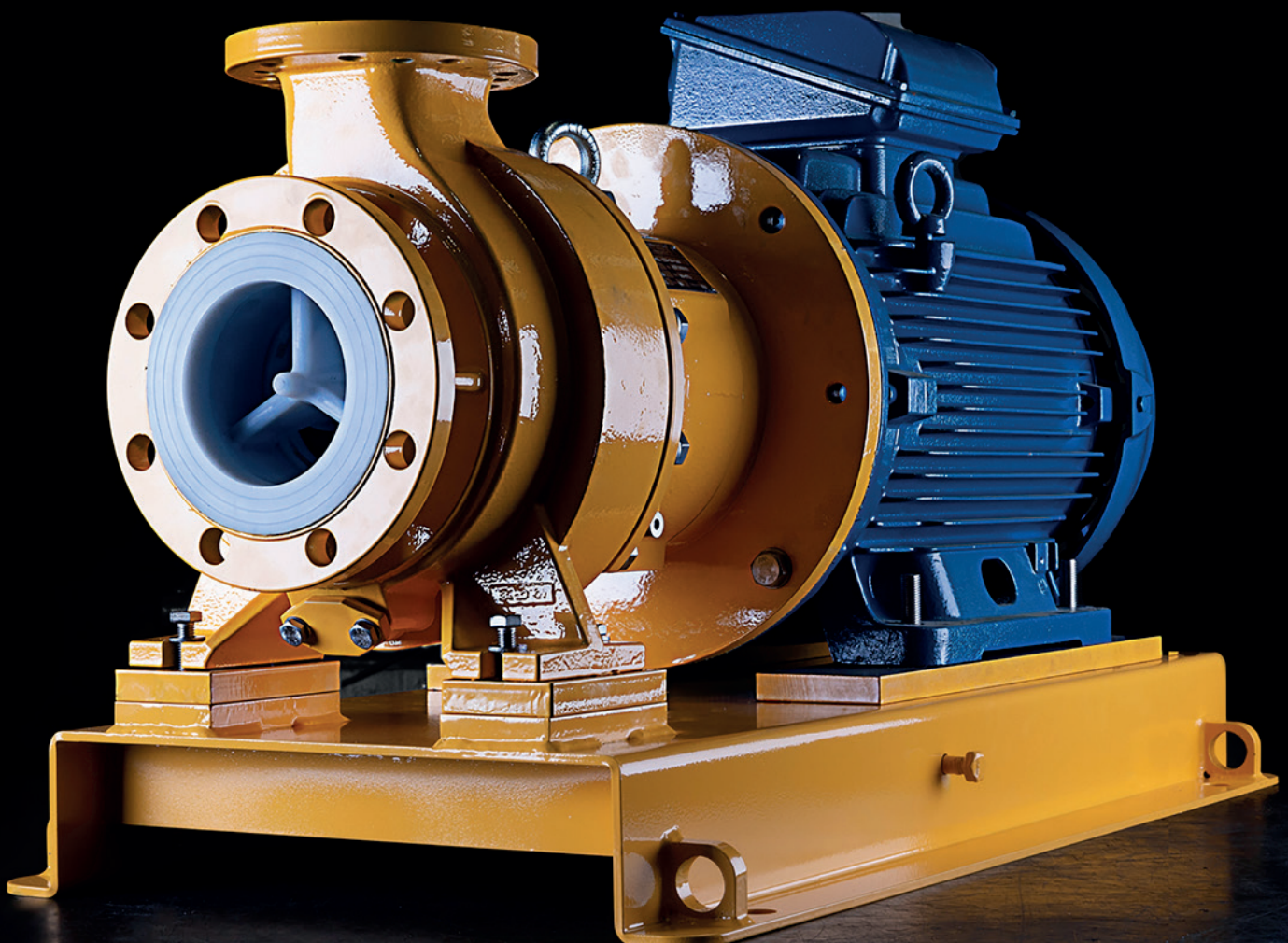
Until now, handling hazardous and toxic fluids with solid particles have traditionally been moved using mechanically sealed pumps, with double mechanical seals, and an external flushing system, all of which require regular monitoring and

could include costly additional ATEX instrumentation, so we needed to find an alternative solution; something that is safe, reliable, and easy to maintain.

The introduction of the new solids handling mag drive pump is reinvigorating the industry; a centrifugal pump that can handle up to 30% solids with zero vapour loss. These pumps allow solid particulates to flow freely without blocking the system with an open impeller and specially designed diamond-coated SiC bearings which allow solids to pass through the pump. With this unit being magnetically driven and zero vapour-loss, cross-contamination and expensive seal support systems are eradicated giving a cleaner, safer unit.

Manufactured by CDR Pumps, the new solids handling mag drives are available in stainless-steel or PFA-lined giving a wide range of chemical compatibilities.

**CDR Pumps (UK) Ltd**  
[cdrpumps.co.uk](http://cdrpumps.co.uk)



# Pitfalls observed following 20 Years of Layers of Protection Analysis use

**L**ayers of Protection Analysis (LOPA) has become the default methodology for Safety Integrity Level (SIL) determination since the publication of the guidance from the AIChE CCPS in 2001.

The completion of LOPAs over many years have revealed some interesting results. The common pitfalls observed can be categorised into two main areas:

- 1) Preparation
- 2) Technical issues

## Preparation

The old saying is very valid in running LOPA studies 'Fail to prepare, prepare to fail.'

1. The timing of LOPAs is crucial, if you have not completed a review of the process hazards using something like HAZOP then when the LOPA session is completed there can be opportunity to downplay / exaggerate the consequences. The result is that you end up with many actions to work out the consequence, reworking assessments once the outcomes are known or leaving the assessment incorrect and not meeting tolerability for the system.
2. Risk Targets – these are set at the corporate level so asking a support organisation such as 'RPS' what should our targets be is an open-ended question. Of course, we can work with customers to develop the targets in line with current guidance. This cannot be done at the beginning of the LOPA session. The targets being incorrect can lead to issues with regulatory authorities. In addition, insufficient protection maybe provided leading to incidents occurring causing harm to people and the environment more often
3. People – Trying to run the session with the incorrect composition of experience within the team for the system in question also means you may end up with the incorrect assessment. Make sure you schedule a multi-discipline team which sufficient experience to attend the sessions (preferably away from the work front so fewer distractions can occur).

## Technical Issues

The correct preparation allows the continuance of the study. The next concern is the correct application of the LOPA methodology. Traceability and justification are key to a robust LOPA session and findings.

4. Initiating Events – using a standard cookbook of figures is commonplace. However, you need to confirm the history of the equipment in use on the area under review. The default might be a 1 in 10-year event but if you see problems every 3 months you are going to demand the protections to work more often than assumed and may end up with a hazardous situation more often. Therefore, having the correct confirmation in the session means that the validity of the assessment would be confirmed.
5. Independence – The publication of IEC 61511 in the second edition clarified the requirements of basic process control (BPCS) protections, that they need to be independent in the entirety including the CPU. Allowing two protections in BPCS has been in the standard since its inception in 2004. Pressure relief systems can often be mis-allocated too, if the relief valves are 50% capacity each then the two should be one protection considering that either of them can fail, a common cause could render both inoperable therefore not providing the quoted risk reduction. Commonly in this case people have taken a credit for each one without considering the capacity and any common cause effects. The check needs to be conducted for all protections with the Initiating Events and the proposed safety function. Not completing this check results in the achieved mitigated event frequency to be reduced and potential that the system is not tolerable. Make sure you include your reasons for the claims to support these checks.
6. Condition Modifiers – These are generally non-engineered measures such as 'chance someone is present' commonly called occupancy. The use of these needs to consider real life data. If you claim 10% of the time someone could be present to be harmed, then make sure you understand why people would attend the area and how long for. It has been observed where incorrect modifiers have been used, for example, chance someone is present for environmental hazards.... the environment is always there. Once again make sure you justify the reasons for selection of data.

Hopefully this brief article has provided some areas to consider when conducting / reviewing your LOPA assessments.

*mark.austin@rpsgroup.com*



# Five problems caused by not using an experienced, technical translator

With the global chemical industry expanding at a rapid rate, it has become increasingly important to ensure 100% accuracy in your technical documentations. But how do you guarantee this if the documents aren't in your own language?

Expanding a business to countries outside of the UK can elevate a company to the next level but can also cause many issues if the expansion is handled incorrectly, especially regarding translated documents. It can be tempting to pay cheap prices for translation services, but at TW Languages, we have seen many businesses trying to redeem themselves following budget providers' translation mistakes.

In the hope of reducing more companies from experiencing this, we are on a mission to outline the issues you could encounter if you do not use an experienced technical translator.

## 1. Cause offence

The last thing you would want to do when you are trying to expand your business into a certain country, is cause offence. Some countries will have very similar social expectations to the UK, but there may be certain dialect that is customary in a foreign country, or phrases that would be misinterpreted as rude.

An example of this was when Coca-Cola launched a new advertisement campaign in New Zealand translated into the native language, Māori, in 2019, but failed to consult with a native speaker. This resulted in what they thought said 'Hello mate' actually translating into "Hello death."

The only way to be sure that no offence will be caused to potential customers, is by having a translator whose native language is the one you are translating into, so that they are familiar with all the linguistic expectations.

## 2. Non-compliance of regulations

Like dialect differentiations, each country may have different regulations that businesses in the chemical industry must comply with. The repercussions of getting this area of translation wrong can be very serious, with many regulations being legal requirements. This presents another reason why it is imperative to not only have a translator who is from the country, but also an individual who is a chemical industry expert. This ensures

the translator is always up to date with any new rules and regulations, and that you will not encounter any possible legal implications because of your mis-translated documents.

## 3. Inaccuracy

This is the most obvious repercussions of not using an experienced technical translator, but it is also one of the most important. Whether a translator makes several small grammatical errors, or a much larger miscommunication error, inaccuracies in a technical document will always result in a loss of trust for your clients.

The Virginia Department of Health came under huge repercussions when they used Google translate to convert Coronavirus FAQs into Spanish. The digital platform translated the phrase "the vaccine is not mandatory" into "the vaccine is not necessary," leading to huge trouble for the US government.

If your products are being sold to pharmaceutical or medical companies to be incorporated with other ingredients, it is vital that all important information is 100% accurate to avoid any concerns around what makes up a vaccine, for example.

## 4. Damage to Reputation

All the above listed repercussions would cause serious damage to your reputation, and potentially affect the possibility of expanding your business globally. In extreme circumstances, word of the issue may return to the UK and affect your whole business reputation which you have worked so hard to build.

HSBC launched an international campaign in 2009 with their slogan as "assume nothing" but when this was translated into other languages, it became "do nothing." The bank had to spend \$10 million dollars rectifying the damage, but not before losing the trust of many of its clients.

## 5. Missed opportunities

Not using an experienced translator could result in missed opportunities for your business, which could have been avoidable. In business sectors as technical as the chemical industry, it is imperative to ensure accuracy and professionalism at all times, and the easiest way to guarantee this is by using experienced, technical translators.

**TW Languages**  
[twlanguages.com](https://www.twlanguages.com)

# Underinsurance – are you covered?

Although not a new phenomenon, underinsurance remains an ongoing concern in the insurance market. The hardening attitudes of underwriters is seeing claims settled in strict accordance with policy wordings.

There has also been a rapid and significant increase in the cost of building materials (and labour in certain parts of the UK) and Policyholders may not realise that underinsurance may impact on payments in the event of a property damage claim.

So, what impact can underinsurance have for you?

If a claim payment does not cover the full property repair/rebuild cost or reinstatement, it could mean funds may not be available to complete the rebuild.

This may result in:

- Negative impact on service delivery to your customers
- Extended negotiations with insurers delaying rebuild
- Borrowing against potentially stretched budgets
- Potential legal action from lenders and leaseholders
- Reputational damage to your organisation

## How does a building become underinsured?

Underinsurance can become an issue, as a result of several factors:

- Reinstatement Cost Assessment was completed many years ago
- No professional valuation or Rebuild Cost Assessment ever undertaken
- Sums insured are based on a notional market value
- Incorrect estimation based on historical information
- No account has been made for structural changes
- No allowance for fluctuating costs of raw materials and labour
- Developer's costs are adopted instead of the true reinstatement cost

Buildings are constantly changing value and there is always a risk that if you place insurance without examining how things have changed you may have an underinsurance risk.

## Implications of underinsurance

The 'Average Clause' is a standard policy condition in UK property insurance policies, allowing an insurer to reduce a claim payment by the amount of underinsurance present at the time of loss.

## Example

Fire damages a building with a sum insured of £7.2M. Loss adjusters are appointed by Insurers, and they calculate the true rebuilding cost of the property to be £9 million (i.e., underinsured by 20%). The cost of the repairs is £5 million, but once Insurers apply the average clause, the claim is reduced by the amount of underinsurance (20%) leaving the policyholder £1 million short of the full repair costs.

A regular Reinstatement Cost Assessment would have identified the underinsurance on which the policyholder could have acted.

Reinstatement costs will typically include:

- The main structure including foundations
- Half of the cost of party walls/protecting adjoining structures
- The peripheral features that form part of the development
- The cost of demolition of the above
- The cost of debris removal
- The cost of professional fees

## New build or newly built properties

Unfortunately, in most cases development costs do not compare well with the costs of reinstatement. Some of the factors which make reinstatement costs higher include:


- The need to commence works urgently
- Demolition costs
- Professional fees
- Changed surroundings due to the passage of time
- Post-development additional features
- Additional site access costs
- The need to protect undamaged sections of a building and prop adjacent buildings
- Less efficient work programming requirements
- The scale of scaffolding and other access costs
- Developer's costs being set on fixed price tenders
- Economies of scale for developers buying materials in bulk
- Zero-rating for VAT for dwellings

## What should you do?

We would only ever advise clients to engage a surveyor certificated by the Royal Institution of Chartered Surveyors (RICS) to perform a Reinstatement Cost Assessment in respect of your buildings.

[www.oamps.co.uk](http://www.oamps.co.uk)

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



are you  
covered?



# Refractometric concentration measurement is providing a robust and cost-effective alternative to the potential risks of radiometry

The online concentration analysis of liquid media is one of the most crucial considerations for accurate process and quality control within the harsh realities of the chemical industrial environment.

Monitoring, recording, and controlling the concentration of dissolved solids in production lines, the process refractometer measures the refractive index continuously and in real time, accurately establishing the concentration, mass ratio, density, or dissolved solids contents of binary or quasi-binary liquids.

Users in industries such as chemical, textile, automotive and semiconductor are switching from radiometric measurement to refractometric technology for a more reliable, less hazardous and continuous solution for which no regular tests are required by law. Measurement is rapid and quantitation is extremely accurate.

FLEXIM worked with a major German chemical manufacturer looking for a suitably reliable and stable, long term alternative to the risks, high cost and administrative and organisational requirements of radiometric density and concentration meters for the continuous concentration measurement of highly corrosive hydrochloric acid. As well as the demands of regular documented maintenance, these meters are also expensive to dispose of at the end of their life cycle.

Producing chlorinated aromatics, amongst other things at its Höchst site, the chemical manufacturer's so-called side-chain plant specialises in the chlorination of the side chain of aromatic compounds, which is carried out by UV catalysts.



**Compliance with the specified concentration must be ensured at all times.**

Chlorination and hydrolysis both produce hydrogen chloride gas. Pure high-quality hydrochloric acid is produced by precipitation with water, following the burning at very high temperatures of the organic exhaust gas components. This is why it is essential to continuously measure this concentration,

ensuring that it is at 30% when fed into the industrial park's integrated network.

**Measurement of refraction is a well-established laboratory method for defining density and concentration.**

For hydrochloric acid there is an almost direct correlation between concentration and refractive index. Refractometers like those used by FLEXIM, combine the high accuracy of refraction measurement with unerring process reliability. Measuring using a patented transmitted-light method, the sensor head directly measures the refraction of light, unlike laboratory refractometers that measure indirectly via the critical angle of total reflection.

[www.flexim.co.uk](http://www.flexim.co.uk) | [sales@flexim.co.uk](mailto:sales@flexim.co.uk)





# Atlas Copco Specialty Rental develops modular 8 ton/h temporary specialty steam solution

Developed in-house by the Atlas Copco Specialty Rental Europe Concept Lab, the organisation has launched its 8 ton/h temporary specialty steam solution.

Combining the latest steam technologies with the skill of specialists and their in-the-field experience, Atlas Copco Specialty Rental's 'Plug and steam' solutions have been designed for steam projects where time, speed, and flexibility are essential. With the new 8T unit, Atlas Copco Specialty Rental can now offer this same agility to larger-scale steam projects.

The 8 ton/h steam solution, which offers up to 72 hours of unsupervised operation, was innovated to meet market demands and challenges. While smaller units (like 1.3T or 6T units) offer tremendous flexibility, their output per hour is limited. Larger units have a massive output (up to 22t/h in the Atlas Copco Specialty Rental fleet) but come with logistical challenges as well as lengthy installation times. The 8T unit combines the best of Atlas Copco Specialty Rental's fleet and fits on one of the company's award-winning 40' Safety Trailer.

The modular unit has been designed as part of the organisation's 'Plug and steam' concept which allows for the creation of a flexible long-term steam solution that is adapted to a customer's unique operational requirements.

For example, to cover a peak in production, units can be added to the set up. As soon as production is back to its usual output, that unit can seamlessly be removed.

Bob Zegers, General Manager at Atlas Copco Specialty Rental Europe, said: "Developing modular solutions goes beyond repackaging existing units. In the Concept Lab, we always start with a blank canvas and rethink everything from the ground up. Only then can we create a Specialty Rental Solution that is a true asset for our customers."

Tom Wouters, Product Marketing Manager at Atlas Copco Specialty Rental Europe, added: "Thanks to its modular concept and large steam output, our 8T unit combines the flexibility of smaller units with a large-scale operational demand for steam. A truly agile solution!"

Atlas Copco Specialty Rental specialises in the provision of state-of-the-art temporary compressed air, nitrogen, power modules, and steam boilers for short or long-term demands, planned contingencies or unexpected emergencies. The 8T unit is the first temporary specialty steam solution developed using Atlas Copco Specialty Rental's expertise at its in-house Concept Lab and complements its existing extensive fleet of industrial steam boiler and steam generators.

**Atlas Copco Specialty Rental UK**  
[industrialrental.uk@atlascopco.com](mailto:industrialrental.uk@atlascopco.com)





# Sasol Chemicals and Holiferm sign agreement to expand the market for biosurfactants

Colour is a marketing differential that has significant branding importance for a company's product range.

Sasol Chemicals and Holiferm Limited have announced a partnership to jointly develop new biosurfactants and enable the broad commercialisation of sophorolipids.

Sasol Chemicals agreed to purchase the majority of sophorolipids produced at the new Holiferm manufacturing facility in Wallasey, which is scheduled to begin operations in early 2023 and will be the largest of its kind in the UK. Sasol Chemicals will also fund Holiferm research and development to accelerate innovation initiatives to help meet the growing demand for sustainable solutions in primary surfactants.

Biosurfactants use natural materials to produce surfactants, which are key ingredients in detergents, cleaning products and personal care products. Sophorolipids are biosurfactants made through fermentation, using yeast to convert vegetable oils and glucose into final product. The Holiferm process offers an extensive reduction in carbon footprint comparative to conventional surfactants.

"We are increasingly using bio-based raw materials to make our products, as we work with our customers to develop solutions that in turn make their products more sustainable," said Silke Hoppe, Vice President of Essential Care Chemicals for Sasol Chemicals. "The Holiferm expertise in the area of fermentation technology and production is a perfect fit with Sasol's position as a global leader in the supply of surfactants and surfactant intermediates into the Fabric and Home Care, Personal Care as well as Industrial and Institutional Cleaning markets."

"We at Holiferm truly believe in the future of biosurfactants and fermentation technologies to reduce the dependence on fossil-based chemicals" said Richard Lock Managing Director of Holiferm. "The drive, passion and commitment Sasol Chemicals are showing with Holiferm Limited is a perfect fit, for both companies and the planet as a whole."

This agreement allows both companies remain at the forefront of the drive to make chemical manufacturing greener and more sustainable.

[www.holiferm.com](http://www.holiferm.com)





# SAVE THE DATE

## Annual Awards Dinner

March 23rd 2023  
@ Hilton Deansgate





# Sci-tech Daresbury's xcellr8 celebrate major breakthrough in animal-free testing with new eye irritation test

**X**CellR8, the Liverpool City Region based laboratory company exclusively devoted to animal-free safety and efficacy tests for the cosmetics, personal care, and chemical industries, has announced its new regulatory in-vitro safety test, Ocular Irritection®.

The Ocular Irritection® test is a much sought-after alternative to the Bovine Corneal Opacity and Permeability (BCOP), providing an equivalent level of scientific data and regulatory acceptance, but without the need to use bovine corneas from slaughterhouses or any other animal components, with results available in just four weeks.

The Irritection® technology was developed by InVitro International and XCELLR8 is the first company in the UK to offer this method (Ocular Irritection® OECD 496).

XCellR8, which has been located at Sci-Tech Daresbury since 2013, counts high street retail brands, large ingredient manufacturers and fast growth SMEs amongst its clients.

Many of its tests are for moisturisers, soaps and shampoos but also include household cleaning products and industrial chemicals.

The use of bovine eyes from slaughterhouses has led to much debate about the status of this test as an animal replacement method, and it raises concerns for companies developing vegan products and consumers seeking out more sustainable and ethical products with many companies will not commission or conduct the BCOP.

However, for chemical companies who need to comply with global regulations across a range of industry sectors, there has been little choice until now.

Ocular Irritection® offers a more scientifically and ethically advanced approach for identifying chemicals inducing severe eye damage and chemicals not requiring classification for eye irritation.

It works by modelling changes to corneal opacity and observing the effect of a test chemical on a macromolecular reagent matrix. The test can determine whether a substance causes severe eye

damage and is a practical first step for a top-down or bottom-up approach to testing as defined in the OECD Guidance Document (GD) 263.

This is a Good Laboratory Practice regulated safety test, with an audited draft report available in four weeks and the final GLP report available in two to four weeks. The total time from day of dosing to final GLP report is six to eight weeks.



**Dr Carol Treasure, co-founder, and CEO of XCellR8 said:** "The announcement of our new Ocular Irritection® test is a major breakthrough for all of us who want to see a world without animal testing.

"Over recent years, the growing availability of in vitro testing services has been pivotal in preserving the lives of countless animals while simultaneously improving the accuracy and reliability of tests that humans rely on to be sure that products are safe.

"However, the ongoing use of animal components in most of these tests compromises their human relevance and can affect the reproducibility of results — a factor that has not been considered until relatively recently.

"That coupled with the increasing consumer demand for vegan goods means that our Ocular Irritection® test is therefore a real gamechanger. This is a test completely free of animal products that does not compromise on quality or safety – what this means for a range of industries from personal care to chemicals is hugely exciting."

**John Downes, chief executive officer of Langtree and chairman of Sci-Tech Daresbury, said:** "It's testament to the expertise and dynamism of XCellR8 and the culture of innovation we've created on campus that such a landmark moment in animal safety has been created at Sci-Tech Daresbury.

"The Ocular Irritection® test is hugely important breakthrough at a time when how we treat the world around us, and our fellow inhabitants, has never been more important. It's therefore a privilege for the campus to support XCellR8 on this latest stage of its very exciting journey."

**For further information please contact Tom Carlin: [carlin@thisisinfluential.com](mailto:carlin@thisisinfluential.com)**



## Suez Water Technologies & Solutions

At SUEZ Water Technologies & Solutions, we apply best-in-class water and process chemicals, treatment services, subject matter expertise, and digital tools to optimize your resources, conserve water and chemical usage and enhance profitability.

### Cooling water treatment

Our solutions are designed specifically to enhance and maximize production output and heat transfer efficiency through deposition, corrosion, and biological control. We can positively impact customers carbon footprint and help them achieve their sustainability goals.

### Legionella management

As a founding member of the Legionella Control Association, we recognise the importance of legionella control and management. With well established and regularly audited policies and procedures we are a vital component of our customers Legionella compliance process.

### Boiler water treatment chemicals

We recognise the critical nature of our customers boiler plants. SUEZ's boiler water treatment programs successfully deliver both online and offline asset protection throughout your steam system.

### Wastewater treatment chemicals

SUEZ's solutions for the treatment of wastewater combine expertise with cutting edge automation and process control of world-class chemistry including foam control, bioaugmentation treatment, coagulants and flocculants, odour control and metals removal.

### Industrial process treatments

From fuel treatment products which reduce deposition and slugging to products which offer soft water corrosion with molybdate-free chemistry for sterilizers and pasteurizers, SUEZ supply a range of industrial process chemicals and the technical expertise to support their application.

### Refinery and petrochemical process treatment

We know the risks involved in operating a refinery. SUEZ experts help minimize unplanned downtime by understanding your refinery's specific needs — then quickly implementing turnkey solutions that ensure safety, secure operational continuity, and optimize cost and resource efficiency.



### Contact:

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## INEOS launches INVIRIDIS, 100% substitution of fossil feedstock - brand new lower-carbon bio product line for its phenol, acetone and alphas-methylstyrene business

INEOS Phenol has launched its first bio-attributed product line for phenol, acetone alphas-methylstyrene (AMS). These products, made without using fossil fuels as feedstock, are to be sold under the INVIRIDISTM brand.

They represent innovation in the global phenol market and offer a more climate-friendly and sustainable alternative to existing phenol, acetone, or AMS.

INVIRIDISTM is made using bio-attributed cumene, which enables the replacement of fossil fuel resources. Mass balance is an essential tool used to reduce the reliance on fossil fuel materials as feedstock across a wide range of industries. In practice, it allows the mixing of renewable and recycled materials with traditional feedstock to create a lower-carbon product. It is recognized as a necessary step in arriving to a fully circular economy.

INEOS Phenol's certification by the International Sustainability & Carbon Certification (ISCC Plus) and The Roundtable on Sustainable Biomaterials (RSB) allows them to use bio, bio-circular and circular feedstock into the supply chain.

INVIRIDISTM products are certified by ISCC Plus and RSB as delivering a 100% substitution of fossil feedstock (mass balance approach) in its production system, enabling a lower carbon footprint compared to conventionally produced products. INEOS' choice of an ISCC Plus and RSB certified product also demonstrates its commitment to working with the emerging bio economy, adding to the extremely strong sustainability credentials of INVIRIDISTM.

Phenol and acetone derivatives are essential to and successfully used in a variety of industrial applications such as automotive, coating, adhesives, construction and insulation foams. They not only impact our production footprint but also in the use of these products in our daily lives.

INVIRIDISTM is expected to have numerous value-added applications across a range of industry sectors, including highly specialised end-uses such as automotive, construction home improvement, electronics and healthcare. INVIRIDISTM will be on offer to the market within Q2 of this year.

Comments Peggy Gerits, Global Sustainability Manager at INEOS Phenol: **INVIRIDISTM is an excellent example of INEOS' ongoing commitment to accelerate progress towards a lower carbon future. It is also a major step forward in INEOS' journey to sustainability and demonstrates our dedication to developing innovative solutions that address society's needs.**



## ikm Consulting

With 25 years of civil & structural engineering and environmental consulting experience, IKM has an extensive portfolio of work within high-hazard and regulated industries.

Our engineering and environmental team have extensive experience supporting bulk fuel storage, manufacturing and transmission terminals throughout the UK.

With offices in Runcorn and Grangemouth, IKM specialises in a wide range of consulting services such as asset integrity, secondary & tertiary containment, asset infrastructure inspection and design, occupied building strategies, environmental risk assessments and COMAH compliance.

IKM has been developing innovative storage tank solutions for decades, from tank deformation & settlement surveys to bund capacity and overtopping analysis. Our integrated teams have a depth of design experience and implement compliant and cost-effective solutions to EN14015, API653, API650, CIRIA C736, and EEMUA 159 standards.

Our teams specialise in providing safe design solutions for high-risk projects and industries, focussing on sustainability and cost-effective engineering and environmental solutions.

Our consulting service is underpinned by ISO9001, 14001 and 45001, in addition to being member contractors of ISNetwork and UVDB Achilles.



### Contact:

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### Twitter:

<https://twitter.com/IKMConsulting>

### Instagram:

<https://www.instagram.com/ikmconsulting/>



# Hello, We wanted to introduce ourselves

## About Us

We're excited to have a new office at The Heath Business Park and wanted to take a moment to say hello.

IKM has 25 years of engineering experience within high hazard and regulated industries. Our commitment to delivering safe design solutions for high-risk projects and industries has allowed us to sustainably grow our teams.



### Contact:

**Head of Business Development:**  
Eddy Winters  
[eddy@ikmconsulting.co.uk](mailto:eddy@ikmconsulting.co.uk)

With an integrated team of Civil & Structural Engineers and Environmental Consultants, IKM has built a portfolio in Chemicals, Petrochemicals, Oil & Gas and Onshore Energy Transmission.

We're incredibly excited for this next phase of our business journey and look forward to engaging with you and the local community.

### Visit Us At

Building 5, Ground Floor, Office 5084  
The Heath Business & Technical Park  
T. 01928 511 043

# Supplying to the Chemical Industry

Knowing your local supply chains is important, and suppliers of expertise, solutions and great products are right here in the northwest. CNW members have a strong association with and many years of experience supplying to the chemical industry. The companies listed in this directory cover a wide range of products and services. They have established customers in the sector, with proven track records. Many will be well known, long-standing firms and there will also be new and innovative businesses that you may not have heard about. Effective supply partnerships, delivering success for all! For more details, the websites for the listed companies and organisations can be found at:

<https://www.cia.org.uk/chemicalsnorthwest/Membership/Our-Members/>

## Chemicals Distribution, logistics & chemical handling

### 2M Holdings Ltd

Chemical distribution and related services of sample management, storage and blending. Provision of AdBlue, Samsol products, packed chlorine and TRIKLINE & PERKLINE chlorinated solvents. Markets served include: automotive, precision cleaning, coating, oilfield & refineries, flavours, fragrances, surfactants for personal care, household and industrial cleaning and pharmaceuticals.

### Actikem Ltd

An ISO9001 certified business, specialising in a range of chemical processes and manufacturing services, including mixing, storage and re-packaging. We provide toll and custom manufacturing services for SMEs as well as blue-chip organisations, and supply customers with on-tap production facilities, offering them potential cost-savings and greater flexibility.

### Brenntag UK & Ireland

Connects chemical manufacturers and chemical users in a value-adding partnership through tailor-made distribution solutions. Offers specific application technology, extensive technical support and value-added services (i.e. just-in-time delivery, product mixing, formulation, repackaging, inventory management and drum return handling). High safety standards and strives to make served industries sustainable.

### F2 Chemicals Ltd

As a specialist in the handling of fluorine gas, F2 Chemicals Ltd offers a variety of organofluorine products all manufactured at our Preston plant. Our primary product is a range of high specification perfluorocarbons, such as octafluoropropane and perfluorodecalin, under the Flutec tradename, used in applications including medical, tracers, plasma-cleaning, cooling and cosmetics.

### Holiferm Ltd

Holiferm uses patented gravity separation technology developed at the University of Manchester to create biosurfactants. These are not only more economically viable, but more environmentally friendly too. Our biosurfactants have applications in many products found around the home including cosmetics, skin care, shower gels and hand cleansers.

### Hosokawa Micron Ltd

Integrated powder processing technologies including: size reduction, air classification, mixing, drying, containment equipment such as gloveboxes and downflow booths. Contract processing services for 1kg to multi-tonne lots. Remote monitoring solutions that include: condition monitoring, analytics for improving product quality and energy efficiency and on-line diagnostics for predictive maintenance and improved plant availability.

### Itac

Itac specialise in developing high performance solvent-based adhesives and coatings. We design and manufacture bespoke adhesives and coatings formulations, enabling our customers to develop market leading products critical to countless end use applications. Itac also provide confidential toll manufacturing services allowing our clients to focus on their business objectives.

### Kanon Liquid Handling Ltd

Design and manufacture of drum, IBC and container filling systems ranging from fully automated robotic systems to simple manual machines. Full range of marine, road and rail tanker loading/unloading and safe access equipment. Distributor for Mann-Tek couplings, with repair facility and 'return to base' option.

### Suez Water Technologies and Solutions

Suez Water Technologies and Solutions is one of the world's leading providers of water treatment chemicals, services and equipment. Through focussing on customer service, value delivery and research and development of new products, we have been instrumental in helping our customers overcome the world's toughest water and process challenges.

## Education, training & skills

### All About STEM

Lots of different projects to bring exciting Science, Technology, Engineering and Mathematics to schools across the region, linking them with business and industry expert volunteers inspiring the next generation of STEM specialists. Building and maintaining relationships with our schools, businesses, industry, colleges and universities so that we can strategically match-make opportunities with need.

### Catalyst Science Discovery Centre

An independent charitable trust playing a pivotal role in promoting science across the Northwest. Catalyst works in conjunction with industry partners to excite young people about all STEM subjects and careers available within the science sector. Companies can also sponsor a local school to visit and attend industry days.

### Centre for Industry Education Collaboration

CIEC supports companies in making credible and sustainable links with primary schools, in order to inspire the next generation of scientists and engineers. We train STEM professionals to improve their communication skills, and develop industry-focused activities for use directly by teachers or by ambassadors visiting schools.

### Chemistry with Cabbage

We work with students of all ages, demonstrating through practical experiments, the relevance of chemistry in solving problems. Research shows that children make career choices very early on, so capturing their imagination early is important. Chemical companies are welcome to support our hands-on work in primary schools.

### EngineeringUK

Not-for-profit organisation promoting the contribution made by engineers to society. We partner business and industry, government and the wider science & engineering community, producing evidence of the state of engineering. Sharing of knowledge and inspiring young people to choose a career in engineering.

### Lancaster University

Lancaster University's award-winning partnerships and engagement team facilitates business collaborations, including student placements, access to over £45m scientific facilities, training,

contract research, and multi-partner collaborative research projects. We liaise with all areas of the chemical industry, from multinational oil, chemical and pharmaceutical companies, to SMEs producing new and specialised products.

### SEERIH

The Science & Engineering Education Research and Innovation Hub positively influences the experience of young people in science and engineering. Expertise in curriculum and teacher development, applied research and creation of innovative projects related to primary science and associated STEM disciplines. Inspiring excellence in teaching and learning in science education.

### The Outward Bound Trust

An educational charity that uses the outdoors to help develop young people. Experts in the development of early talent and specialising in providing experiential learning and development programmes for apprentices and graduates. Identification, development and change of people behaviours in line with organisational needs.

### TTE Training Ltd

Engineering training and apprenticeships focused on whole person development and bridging the sector's skills gap. The learning environment will be one which is welcoming, safe and inspiring, appropriate to the subjects and responsive to the needs of the learner.

### Warrington & Vale Royal College

Delivering vocational, professional and apprenticeship qualifications across science and engineering. Home to a new Advanced Manufacturing & Engineering Training (AMET) centre and dedicated science laboratories. Continually building relationships with schools, businesses and industry to help bridge the skills gap. Bespoke course and packages available. [www.wvr.ac.uk](http://www.wvr.ac.uk)

### Wirral Met College

Provision of education and training, supporting innovation and development. The College is pioneering SIP traineeship programmes with local employers, preparing young people for science apprenticeships. New STEM Centre opened in 2016.

## Engineering products & services

### Addison Project

Addison Project is a Multi-Disciplined Engineering Project Management & Design organisation, established in 1997, with offices located in Cheshire, Lancashire and Teesside. We have an in-house team of engineers and designers circa 130 people, catering for mechanical, civil, structural, EC&I, process engineering and a full range of CDM services.

### Beamex

Beamex helps its customers to find a better way to calibrate, according to the most demanding requirements of process instrumentation. Beamex offers a comprehensive range of products and services – from portable calibrators to workstations, calibration accessories, calibration software, industry-specific solutions and professional services.



## Know your supply chains

### CDR Pumps UK

A leading independent Pump manufacturer. Since opening our doors 60 years ago, we have gone from strength to strength bringing you a company that has the product, service and knowledge to support the chemical, nuclear and pharmaceutical industries on a global scale. And small enough to give you the individual care and attention you need yet big enough to support multi-site, multi-national blue-chip chemical companies. Our global manufacturing facility in Milan is strategically located to support our customers across the world.

### DHD Cooling Limited

Design, installation and maintenance solutions for industrial cooling. Our service extends to cooling system inspection, testing, service, maintenance and new equipment capability. Regulatory and reliability assessments, thermal performance improvements, turnkey projects and carbon footprint reduction.

### Dron & Dickson

Dron & Dickson are recognised market leaders in the supply and maintenance of hazardous area electrical equipment. Our Engineering Services and Wholesale divisions offer bespoke solutions incorporating the very latest industry standard and safety legislation.

### Flexim Instruments UK Ltd

We support UK clients with their measurement, commissioning, verification & maintenance needs. Offering clamp-on flow metering of liquids & gases; SIL 2 for safety critical duties; mass flow or concentration measurement options from outside the pipe; virtually zero maintenance; no cost escalation with exotic pipe, pressure or temperature; no outages for commissioning or maintenance; zero leak paths

### HTS Engineering Group Ltd

Process safety and safety instrumented systems, delivered with a high level of engineering and expertise with cost efficiency. Four key engineering services that can be tailored individually or as one complete solution: process control & software engineering, engineering & design, site installation and inspection services.

### Laker Vent Engineering Ltd

Supply, fabrication and installation of process and utility piping systems. Project management, detailing, procurement, on and off-site fabrication and installation of pipework and coded welding. Associated steelwork supporting and mechanical installation of plant and equipment. Testing and Handover. Pipework and steelwork is fabricated to specific customer-needs and conforms to all appropriate ISO, BS EN and ASME standards and specifications.

### Lokring UK

Lokring UK offer technical engineering support and sales for Lokring technology across the UK. The Lokring "Cold Weld" pipe and tube joint reduces the need for hot work, NDT inspection and reduces on site resources. Code compliant with ASME B31. Lokring is a Safer, Faster, Lower Cost replacement for site welding and flanged fabrication.

### Manntek AB

Supply of safety dry disconnect and safety breakaway couplings. Comprehensive range of specialist dry quick release couplings to suit 99% of known chemical applications. Bespoke solutions with a size range of 3/4" to 8" nb. Dry disconnect couplings are made to NATO standard Stanag 3756.

### METTLER TOLEDO

Mettler Toledo manufacture & service weighing, analytical and inspection equipment used throughout the product cycle from Research & Development, through Scale-Up & Production to Quality Control, Storage & Despatch. We work with our customers to understand and achieve their business goals, including key areas of safety, quality, productivity and sustainability.

### MCE Group

Offering valve service and overhaul in our state-of-the-art service workshops, or on site, using OEM parts, from single valves to complete outages.

European distributor for ValvTechnologies, providing severe service, zero-leakage isolation valve solutions, setting the standard for the next generation of valves for the chemical industry.

**Michael Smith Engineers Ltd** have been supplying pumps to the UK Chemical industry since 1971. We specialise in sealless pumps and our product range includes gear pumps, centrifugal pumps, high pressure pumps, piston pumps, side-channel pumps, vane pumps, AODD pumps and barrel emptying pumps with thermoplastic, metal or PTFE-lined wetted parts.

### Perry Process Equipment Ltd

Buying and selling of high quality used processing plant and equipment. Savings of up to 70% on the cost of process equipment, full mechanical and electrical refurbishment and equipment immediately available from stock. Centrifuges, dryers, evaporators, filters, heat exchangers, mills, mixers, reactors, separators, tanks.

### Pumptec Engineering Services

Specialises in supporting the chemical industry in the inspection, repair, overhaul and fitting of all types of rotating equipment. Our highly trained engineers can support your routine maintenance, call outs and shutdowns. Our Wirral based machine shop can complete overhauls on your pumps, fans and mixers.

### ProDecon®

Providing industrial service solutions to the Oil&Gas, Chemical, Power, Pharmaceutical and Industrial sectors. Specialising in hazardous hydrocarbon and chemical environments. ProDecon® has a unique range of technical expertise, that enables us to support customers with restoring process performance and providing maintenance risk management through bespoke industrial cleaning solutions.

### SABSCO (Steam and Air Blowing

**Service Company)** is the British subsidiary of the Solarca Group, with offices in Kent. They have been providing world-class steam/air blowing services on projects across the globe since 2003. With the addition of SABSCO, the Solarca Group gained a major competitive advantage: the ability to offer integrated chemical cleaning and steam/air blowing services. World-renowned in their field, they have been selected by leading engineering companies for large-scale steam/air blowing projects in every corner of the globe

### Studley Engineering Ltd

A multi-disciplined mechanical and electrical engineering contractor, providing a comprehensive service to the process industries in disciplines including: steelwork, welding, maintenance, site services, pipework, tanks and vessels. Over time we have gained an enviable reputation as a reliable, responsive, motivated contractor that delivers safe, high quality, cost effective work.

### Swagelok Manchester

Fluid system solutions, products, training and services. Supply of over 7000 fluid system components including: fittings, hoses, tubing, regulators, equipment servicing and custom fabricated solutions. Provision of practical information, know-how, tools and speciality services needed to purchase, manage and apply them successfully.

### Yokogawa

Yokogawa is a leading provider of field instrumentation, safety systems, industrial automation and digital transformation solutions. IIOT, OT Cybersecurity and Alarm Management are specific areas of focus for Yokogawa's Advanced Solutions team with a number of major projects currently being delivered across Europe.

## Engineering project management & energy

### 6 Engineering

Is a safety engineering consultancy for the major hazard industries specialising in process and functional safety. Our mission is to provide world class safety expertise, helping you to keep people and assets free from unnecessary risk. Our site engineers can be there to support you when you need us. See more at [www.6engineering.co.uk](http://www.6engineering.co.uk)

### Atlas Copco Rental UK

Provides temporary cost and energy efficient solutions for long- or short-term demands, planned maintenance or unexpected emergencies. Our engineers design the most suitable temporary installation, utilising our fleet of state-of-the-art equipment which includes 100% oil-free Class 0 and oil-injected compressed air at medium or high pressure, generators for power, and nitrogen. Quality of service, environmental care and personnel safety are guaranteed by our triple ISO certification.

### Axiom Engineering Associates Ltd

An award-winning company specialising in the provision of UKAS accredited inspection services, backed up by a mechanical and materials asset integrity section. Acting as the design and inspection authority to many blue-chip companies, working across a broad range of process sectors such as: chemicals, petrochemicals, bulk storage, power and pharmaceuticals.

### Clarke Energy

Specialists in the engineering, installation and maintenance of reciprocating engine-based Combined Heat & Power (CHP) plants. Offering ranges from supply of an engine through to turn-key installation of a multi-engine power plant. Our facilities deliver fuel efficiency, dramatically lower energy costs and help reduce carbon emissions. Carbon dioxide can also be recovered.

### Graham Hart (Process Technology) Ltd

Delivering high integrity heat transfer equipment for over 45 years. The company has a strong emphasis on Chemical/Process & Mechanical Engineering backed up by an advanced manufacturing facility.

### Otto Simon Ltd

Diverse engineering consultancy and project delivery organisation. Initial consultations, technical and commercial due diligence and front-end design and definition. Feasibility studies through design, supply, erection, and commissioning services using in-house and licensed technology. Services for complete plants or upgrades. Procurement, construction management, start-up and operation & maintenance expertise.

### PM PROJEN

A multi-disciplined engineering, design and project management business working across a range of market sectors for a diverse mix of clients from SMEs to multinational blue-chip companies. We are part of PM Group, a 2,200 strong, employee owned company operating across Europe, Asia and the USA.

## Engineering, IT & process consultants

### EJ Peak Technology Solutions

Process control, industrial automation systems and manufacturing analytics. A unique combination of automation projects, consultancy, and performance improvement services delivered by experienced teams. FEED, process control projects, legacy asset replacements, control room and operational technology, modern manufacturing analytics solutions.

### Gexcon UK Ltd

Safety and risk management and advanced dispersion, explosion and fire modelling. Unique expertise and shared knowledge on how to prevent explosion accidents. Carrying out accident investigations and dedicated facilities for physical testing. Ventilation and dispersion modelling also available. Hazardous area classification and quantitative and qualitative risk analysis and assessment.

### Siemens Digital Factory & Process Industries and Drives

Productivity and efficiency requirements continuously increase in the field of process automation. A comprehensive range of process automation and Drives products as well as an award-winning range of training and support services.

## Environment, health & safety risk management

### ABS Consulting

A global process safety consultancy and training services provider with regional headquarters in Warrington, UK. Our expertise in data-driven risk and reliability includes a range of capabilities: root cause analysis, incident investigation, organisational culture evaluation, risk management, process hazard analysis, bow-tie and data science techniques. Our approved process safety leadership training courses and proficiencies also include building risk assessments, HAZOP analysis, compliance auditing, asset integrity management competency assurance and management systems certification services.

### BakerRisk Europe Ltd

Dedicated to help predict, prevent and mitigate hazards and explosions, fires and toxic releases. Specialising in process safety and risk management, we help clients understand their risks and offer cost-effective risk management solutions. Success is delivered through proven knowledge and experience, innovative research and unique engineering capabilities.

### Chemical and Industrial Consultants Association

An association of independent consultants with extensive experience, many having worked in the chemical industry, across various fields. Provision of technical and business advice on almost every aspect of chemical manufacture, development, marketing and management.

### IKM Consulting

With 25 years of civil & structural engineering and environmental consulting experience, IKM's portfolio in high-hazard and regulated industries is extensive. With offices in Runcorn and Grangemouth, IKM specialises in consulting services around asset integrity, secondary & tertiary containment, asset infrastructure inspections, environmental risk assessments and COMAH compliance.

### RAS Ltd

Expertise that covers the full range of risk assessment and management services across; safety risk, business risk and environmental risk. Carry out Quantitative risk Assessments and Predictive & consequence modelling, through 'softer' risks affecting an organisation's reputation.

### RPS Group

Provision of specialist consultancy to help those with responsibility for health and safety achieve compliance. With particular expertise in the chemicals sector, we provide support from plant development through to operation. Core services include: ATEX/DSEAR, asbestos, BowTie analysis, CDM, COMAH support, fire safety engineering, functional safety, hazard identification, Legionella, occupation health and risk assessment/analysis.

### SLR Consulting

A unique blend of leadership, management, consulting, engineering and training services is offered to the chemicals industry. A forerunner in sustainable process safety management combined with proven business improvement capabilities enables delivery of practical solutions to promote safety and efficiency in design, operation and maintenance of complex hazardous facilities.

## Facilities, finance and other business services

### Department for International Trade – Northwest

Operational support for British exports as well as facilitating inward and outward investment activity. Support is given to first-time exporters or established exporters requiring more help with accessing more difficult markets or putting strategic alliances in place. Access to expert advice, trade services, training and events.

### Halton Borough Council

World renowned research facilities such as Sci-Tech Daresbury and The Heath alongside many companies at the cutting edge of science, technology and advanced manufacturing. We oversee capacity in terms of land, buildings, people and business support creating a world class location.

### Pen Underwriting incorporating OAMPS

Specialist Insurance services to high hazard manufacturing and haulage industries. Motor fleets, property, liability and transit policies. We help clients minimise risk through proactive risk management and a range of training and response services to assist companies in planning for and dealing with incidents and emergencies.

### Sci-Tech Daresbury

We are a national science and innovation campus, and enterprise zone providing a range of office, laboratory and workshop accommodation for technology companies (from a desk to large laboratory and office units). Companies have access to a range of facilities covering material analysis, virtual design & simulation, and rapid prototyping.

### STFC Innovations Technology Access Centre

A unique, fully equipped space for innovation, research and development. Providing flexible access to laboratory space, "hot labs" and scientific equipment. Ideally suited to start-up companies, smaller and medium size enterprises and R&D team from established companies.

### TW Languages Ltd

Provision of a professional and reliable multi-lingual translation service delivering high quality translations. We specialise in business, technical and scientific translations into 250+ language combinations. We provide certified translations for legal purposes. We are full members of the ATC & EUATC and ISO 17100 Translation Services certified.

## Laboratory products, testing and services

### XCellIR8 Ltd

A world leader in animal-free testing. Our GLP accredited laboratory provides ground-breaking in vitro safety tests for the chemical and personal care industries. We are passionate about delivering testing strategies that are both scientifically advanced and ethically sound. Our award-winning work is recognised at a regulatory level by the OECD and ECHA.

## Legal & patents

### Appleyard Lees LLP

Patent and trademark attorneys. Aim to obtain the best possible patent protection for clients. Experience of product clearance against competitor patents and in due diligence for mergers and acquisitions. Advice on licensing issues and collaboration agreements relating to IP.

### Bawden and Associates

A legal firm providing professional services across all IP matters. Drafting and prosecution of patent applications, handling opposition and appeals in the EPO and in litigation in UK and international courts. Business led and strategic approach to generate assets of real commercial value.

### RW Legal Ltd

Provision of pragmatic legal advice to companies in the chemical sector. Particular expertise in drafting and negotiating commercial contracts. Managing legal risk through early involvement to save time and resources in the long run. Competitive rates and flexible fees without sacrificing quality.

### Squire Patton Boggs (UK) LLP

Global legal company providing legal, regulatory and advocacy assistance to the chemical and performance material industries. Expertise that emphasises areas that mean the most to industry such as environmental, mergers and acquisitions, commercial finance, construction, litigation, IP, public policy and international expansion.

### Symmetry Law

Specialist law practice structured to provide "partner" level experts at "junior" level prices, with a focus on the 'high consequence' end of the spectrum. Legal services include: environmental, safety, regulatory, contracts, tax, construction, green incentives, litigation.

### Withers & Rogers LLP

A leading UK and European intellectual property law firm with five offices including London and Munich. We offer a range of IP services including obtaining UK, European and worldwide patent or trade mark protection, the handling of contentious matters, advice surrounding licensing arrangements and issues including validity of patents and "freedom to operate".

### WP Thompson

Intellectual property attorneys providing high quality advice to start-ups, SMEs or FTSE 100 companies. Team of experienced IP attorneys specializing in chemistry and life sciences, with first degrees and PhDs in these fields. Securing the most appropriate, cost effective and commercially valuable protection for your intellectual investment and innovation.



## Know your supply chains

### REACH and chemicals services

#### Dr Knoell Consult Ltd

An independent service provider for the chemical and related industries. Globally the Knoell group has over 450 employees covering all aspects of regulatory compliance for industrial chemicals, agrochemicals and biocides: e.g., strategic planning, dossier preparation, exposure assessment, SDS preparation, and from REACH to K-REACH!

#### GlobalMSDS

A complete safety data sheet/literature and regulatory service for your entire product communications in any language, style and format required. Hazmix is a new 'pay as you go' web-browser product that is setting a new standard in SDS authoring. A Solutions service that also provides technical advice.

#### Intertek Regulatory Services

Health, environmental and regulatory services for implementation of chemicals management. Worldwide registration of chemicals, food contact compliance and notification, global chemicals compliance, design/optimisation of toxicological and eco-toxicological studies, hazardous substance management, EU cosmetic and biocidal products compliance, classification & labelling, SDS consulting.

#### Yordas Group

Yordas Group is a leading provider of scientific, environmental, human health and global regulatory consulting services. They offer chemical regulatory support, expert scientific services and support on chemicals management and product stewardship, global hazard communication, hazard and risk assessment, analytical and (eco)tox testing.

## Recruitment

#### Adepto Technical Recruitment

A specialist engineering, manufacturing and scientific recruitment consultancy that focuses upon the provision of permanent staff and contract resource to the Chemicals industry. Established in 2015, Adepto has quickly become the partner of choice for many blue-chip and SME manufacturers, engineering companies and consultancies due to our deep knowledge of the industry, credibility and professionalism.

#### Eleven Recruitment

Eleven Recruitment has been a specialist recruiter in the chemicals, energy and commodities sectors since 1999. We have a strong track record of sourcing mid and senior level talent, including C-Suite, with specialist knowledge and experience. We can provide both contingent and retained recruitment services or work with clients as an integrated recruitment partner.

#### Handley James Chemical

Mid to senior level appointments solely within the Chemical Manufacturing space. Over 30 years search experience. The company was built on the success of Stuart Tomkinson's successful 11-year recruitment career primarily within the chemical manufacturing arena. Focusing on providing the best talent in the chemical industry. We work closely with you, to understand your business, your culture and exactly what you are looking for from a recruitment partner.

#### Millbank

With over 30 years' experience providing recruitment solutions to major clients in the chemical sector, Millbank has an extensive database of experienced candidates and contractors ready to join projects across the region. A true recruitment partner, Millbank offers services ranging from contract and permanent placements through to fully managed services.

#### RMG

RMG is an award-winning headhunting consultancy with a difference - we make it our business to search and understand who's who in the Chemicals and STEM sectors and have the know-how to find talented people who will deliver lasting impact and add financial value to your organisation.

#### Science Recruitment Group

Experts in the recruitment of scientific, regulatory, quality, engineering and technical professional across all areas of the industry. Support in recruiting temporary, contract or permanent staff for your team.

#### Science Solutions Recruitment

Is a specialist science & technical recruiter with specific expert teams to service niche fields, including speciality chemicals, drug discovery, polymers, materials, cosmetics, personal care, household products, pharmaceuticals, biotechnology & medical devices.

#### TransitionPlus Ltd

Executive search for science-based organisations, talent development, outplacement and career transition support. Experienced chair, NED, coach and business development consultancy. The "Plus" is to ensure that considerable attention





## A global leader in environmental and advisory solutions

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We help businesses get the most from their assets by developing people, plant, and management processes to drive sustainable improvements in safety, environmental protection and productivity.

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