

ALUMINIUM NEWS

THE VOICE OF THE UK ALUMINIUM INDUSTRY

ISSUE 6 SEPTEMBER 2020



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RIGHTON

BLACKBURNS

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Righton Blackburns operates from 13 Service and Processing Centres across the UK, offering a reliable and efficient delivery service from locally held stocks for standard, non-standard or customer specific material.



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DIARY DATES

SEPTEMBER

15	Health, Safety & Environment Support Group
21/22	The Effective Team Leader
24	Aluminium Production & Global Demand
29	The Working Organisation (Day 1/2)

OCTOBER

1	Wrought Aluminium & Applications
6/7	World of Aluminium (2 x am session)
8	Aluminium Distribution Sector Group
13	The Working Organisation (Day 2/2)
15	Heat Treatment of Aluminium
22	Finishing Sector Group Meeting
29	Elastic & Plastic Behaviour of Metals

NOVEMBER

3	The Performing Organisation (Day 1/2)
4/5	Advanced Engineering Show
10	The Performing Organisation (Day 2/2)
12	Production of Wrought Aluminium
12	Recycling Sector Group Meeting
12	LinkedIn for business
24	The Thriving Organisation (Day 1/2)
24/25	Aluminium for Engineers, Part 1 & 2 (am only)
27	Extrusion

DECEMBER

1/2	Essential Selling Skills
1/2	Aluminium for Engineers, Part 3 & 4 (am only)
3	ALFED Board Meeting
8	The Thriving Organisation (Day 2/2)
10	Drawing Shaping & Forming of Aluminium
10	Health, Safety & Environment Support Group

FOR MORE INFORMATION PLEASE VISIT:

EVENTS: www.alfed.org.uk/aluminium-federation-events/

TRAINING: www.alfed.org.uk/alfed-training/training-with-alfed/#ourcourses

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twitter.com/alfedaluminium

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Front cover image courtesy of ARYZZ Metals

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COVID ECONOMIC RECOVERY



The UK government put into action their plans to save lives by slowing down the spread of the coronavirus, they implemented dramatic measures, with huge implications for the UK economy. Lockdown was announced on March 23, 2020, to control the COVID-19 pandemic, this may have had a positive effect on protecting public health but is taking its toll on the UK economy. Analysts estimated in a typical lockdown week in May 2020, the economic activity (GDP) was down almost 30 percent compared to February 2020 levels. The Office for National Statistics (ONS) data showed from April 6 to 19, 2020, 23 percent of UK businesses had temporarily closed or stopped trading, almost 60 percent of businesses that continued to trade reported a steep fall in revenues and demand.

The economic recovery of UK aluminium continues with output slowly rising, companies are gradually recalling staff off furlough to return and economic activity will continue to be positive as lockdown restrictions are removed. What will the economic activity look like as we head towards the third fiscal quarter of the year, the speed and patterns of recovery are highly uncertain and will vary by sector. When you factor in possible regional rises in COVID-19 around the UK, reoccurrence of the virus after containment, possible slower growth a longer-term recovery is likely. According to McKinsey's midpoint scenario the UK GDP is expected to shrink by 9% in 2020 overall (www.mckinsey.com/business-functions/strategy-and-corporate-finance/our-insights/in-the-tunnel-executive-expectations-about-the-shape-of-the-coronavirus-crisis).

NEW ALUMINIUM ORDERS RISE FOR THE FIRST TIME IN 8 MONTHS

The global aluminium-using industry saw a return to growth at the start of the second half of 2020, driven by a renewed upturn in new orders and stronger output growth than seen in June. Cost pressures meanwhile quickened to the sharpest for 20 months, as firms saw rising freight costs and metal prices. The Purchasing Managers Index™ (PMI) for aluminium rose above the neutral 50.0 mark for the first time in eight months during July. At 50.9, the index pointed to a renewed

improvement in operating conditions, driven by a solid increase in output at aluminium-using companies. The increase in output was the second in as many months, and notably faster than that seen in June. Moreover, it was broad-based across the three monitored regions: Europe, Asia and the US. European users led the way with a solid rise in production, with analyst relating this to higher demand for goods and a partial recovery in economic conditions.

DEMAND

Organisations highlighted a pick-up in demand from the lows seen during the COVID-19 pandemic, the rate of increase was marginal but nonetheless the quickest in nine months, driven by upturns in Europe and Asia. Domestic sales were behind the expansion, as latest data signalled a further fall in export business. That said, the decline was only mild and the softest recorded since December 2019.

CAPACITY

Some aluminium-using firms were unable to complete new orders, leading to a modest accumulation of backlogs in the latest survey period. Purchasing activity picked up slightly for the first time in nine months in July and is led to a further slowdown of delivery times, reportedly as many suppliers had reduced capacity and faced shortages of several inputs.

PRICES

Companies commented on higher logistic costs, rising metal prices and changes to exchange rates as reasons for increased input prices. Meanwhile, output charges rose for the first time since January as some companies passed higher costs on to consumers. Demand at aluminium users grows, albeit slightly. Output expansion quickens as firms raise purchases and cost pressures strongest in 20 months. *Source: IHS Markit*

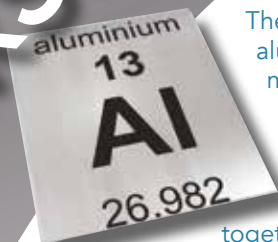
MEMBERSHIP

The Aluminium Federation continues to develop membership attracting organisations that work in the aluminium industry, the wider industrial sector and now many others who support the sector supply chain. Our membership has grown to 30 this year, 7 in the last 6 weeks and with many potential members looking to be part of the ALFED family through these challenging times.

Our strategic partner program continues to expand connecting the Aluminium Federation members to a vast resource of knowledge and collaboration on new projects with Universities, Catapults, Industry and Government.

Tom Jones
CEO
Aluminium Federation

MEMBERSHIP



ALUMINIUM FEDERATION IS THE VOICE OF THE UK ALUMINIUM INDUSTRY

The Aluminium Federation represents businesses who process, trade and work with aluminium. We foster innovation, promote best practice, develop skills and champion member interests. From training and networking to research, advocacy, lobbying and outreach, we help our members solve problems, capitalise on opportunities and boost their competitiveness.

As a member, you become part of an influential community, getting your voice heard within the industry and at the highest levels of government. Working together, we are actively driving UK aluminium forward - and we look forward to working with you in this endeavour.

COLLABORATION:

We bring together recycling and secondary producers, extruders, finishers and stockholders – helping everyone involved in UK aluminium make connections for mutually beneficial business and supply development.

INNOVATION:

You benefit from a range of services that help you stay at the cutting edge. From research and development through to industry benchmarking and technical support, you get insight that assists you to develop your business.

OPPORTUNITY:

We give you a unique opportunity to get your voice heard - within the industry and in government. Whether you're a global company or an SME, you can advocate and influence to improve market conditions for your products and services.

MEMBER BENEFITS:

Benefit from a range of services that help you develop your business, workforce and supply chain:

- Advocacy & lobbying
- Market insight
- Training
- Technical support
- Consultancy from energy management support to bespoke training, coaching and e-learning
- Events
- Influence & Policymaking
- Shared Learnings & Networking
- Savings & Partnerships

WHY JOIN THE ALUMINIUM FEDERATION

Whatever your company size or speciality within the industry, we help you access the technical expertise, market insight, business support and government influence you need to boost your competitiveness.

We offer different levels of membership based on your business size – so it's both affordable and valuable.

"As an ALFED member, you get your voice heard. We're a small metal finishing company, but I get my voice heard very loudly. When I was the ALFED President, this gave me influence at a high level with government – I was routinely on calls with ministers and civil servants. And I had my voice heard even before I was president. In 2004, the British standard changed to an EU-wide one that was much weaker. I campaigned to change it, and as an ALFED member, I had a say via the Finishing Group. I got my opinions over, and the standard is now changing. It was a real success for our business."

Giles Ashmead, Director,
Powdertech

**CONTACT US
TO DISCUSS HOW
ALFED MEMBERSHIP
CAN HELP YOUR
BUSINESS**

T: 0330 236 2800

www.alfed.org.uk

ALFED
ALUMINIUM FEDERATION

EVERYTHING WE DO FOCUSES ON HELPING UK ALUMINIUM BUSINESSES CAPITALISE ON OPPORTUNITIES

RIGHTON BLACKBURNS, UP TO THE CHALLENGE!

In November 2018, Righton Limited and Blackburns Metals Ltd, two independent organisations, were merged to become a single entity, Righton & Blackburns Limited.

At the time of the merger, Dennis Parker, MD of Blackburns Metals Limited and now head of the new organisation stated:

"This will be a testing period of change but ultimately will deliver a significantly enhanced opportunity for all".

Having successfully worked through a complex period of transition, Brexit popped up to further test the resolve of the new business and, once again, thanks to the skill and dedication of the staff, a smooth path was prepared in readiness for the UK's exit from Europe.

To quote from a famous film, 'Just as you thought it was safe....' the world was hit by the global pandemic Covid-19 where business confidence was shaken, economies stalled and everyone had to adapt and adjust to the new 'normal'.

For the third time in under a year, the management team and employees faced a severe test, perhaps the greatest in living memory and, once again, thanks to the skill, grit and determination of all, Righton Blackburns has adapted and risen to the challenge.

To quote Dennis Parker:

"We should be proud of our management team and all our employees; the fact that as a business, we have continued to operate throughout the pandemic with little effect to our service and ability to supply our customers and critical industries is a credit to all. We are now 8 months into the year and in 'Recovery' mode".

"With our business reduced, we, like many, many other organisations, have had to make savings. We have made good use

of the excellent support of the furlough system to preserve as many jobs for the future as possible".

"We have had to adapt and be flexible to secure the future of the business and aid recovery. It is now that we have to take action, get on to the front foot and pull together, and I know that every individual is doing their utmost to get our business back to where it was pre the pandemic, and beyond".

Dennis Parker concludes:

"Righton Blackburns is a proactive, well-resourced and highly capable group of people, ideally placed to serve its customers and to help drive the UK economy, we are not looking backward, we are looking forward and up".

Righton Blackburns is an independent materials stockholder and distributor which has been a trusted supply partner of aluminium, stainless steel, high integrity copper alloys and high-performance plastics for over 100 years.

Operating from 13 service and processing centres across the UK, Righton Blackburns is well placed to service any requirement, from 'one off supplies', through direct-to-line feed services, to long term contracts. The business offers a reliable and efficient delivery service from locally held stocks for standard, non-standard or customer specific material via its own, dedicated transport fleet.



SS CAPE FLORIDA ARRIVES AT THE PORT OF BROWNSVILLE AFTER HER FINAL JOURNEY

International Shipbreaking LLC, (ISL) part of EMR, one of the world's leading metal recyclers has been awarded a U.S. Maritime Administration contract to transport, strip and recycle the decommissioned barge carrier SS Cape Florida (AK 5071).

After being awarded the contract on July 6th 2020, ISL made preparations to tow the Cape Florida from US Maritime Administration Ready Reserve Fleet in Beaumont, Texas (BRRF) to its facility at the Port of Brownsville, Texas, where she arrived on August 13th 2020.

Aboard Ship (LASH) Barge Carrier. LASH Barge Carriers transport light unpowered barges "Lighters" and are commonly called "Kangaroo Ships". She is equipped with a large gantry crane system capable of lifting these barges out of the water for loading and placing them back in the water at the destination.

Chris Green, the senior manager of the Brownsville site commented: "It is with great pride that we have been awarded this ship recycling contract. Extensive safety and environmental assessments are taking place on board to ensure that this ship recycling project is carried out to the highest standards"

The project, set for completion in early 2021, will see 98% of all materials removed being recycled.



PROSTATE TESTS

According to the NHS prostate cancer is the most common cancer in men in the UK. It usually develops slowly, so there may be no signs for many years.

The causes of prostate cancer are largely unknown. But certain things can increase your risk of developing the condition. The chances of developing prostate cancer increase as you get older. Most cases develop in men aged 50 or older. For reasons not yet understood, prostate cancer is more common in men of African-Caribbean or African descent, and less common in Asian men. Men whose father or brother were affected by prostate cancer are at slightly increased risk themselves. Recent research also suggests that obesity increases the risk of prostate cancer.

It can be difficult for men to visit venues to have a prostate test. The Aluminium Federation is working with an organisation that can hold testing days at companies. Please contact Kathy Rombach at ALFED for more information. Tel: 0330 236 2800 or email: k_rombach@alfed.org.uk.



STUDENT STARPACK AWARDS

Alupro, the aluminium packaging recycling organisation, has been announced as the latest sponsor of the 2021 Student Starpack Awards. Organised by the Institute of Materials, Minerals and Mining (IOM3), the competition challenges university students to identify creative packaging solutions to problems set by leading brands.

As part of the agreement, Alupro has provided a comprehensive brief, tasking applicants with the design of a personal grooming product to highlight the sustainability, recyclability and shelf appeal of aluminium. Alongside a cash prize of £500, the winner will be welcomed to the Crown Packaging Global Technology and R&D centre in Wantage to see, first-hand, the packaging design and development process.

The Student Starpack competition, established in 1964, aims to inspire the next generation of packaging experts by identifying, rewarding and supporting talented young people and their tutors, encouraging them to bring innovative new ideas to the UK's ever-growing packaging industry.

As part of the brief, The Aluminium Federation (ALFED) will provide free bespoke training sessions on the benefits of using aluminium in packaging design and how the metal is formed and shaped using different technologies.

For more information about the Starpack awards, visit: www.iom3.org/starpack.



EVERY CAN COUNTS

Every Can Counts has constructed a giant rainbow on the Brighton Beach seafront made entirely from 2,000 recycled aluminium cans. Every Can Counts initiative highlights the importance of recycling valuable aluminium cans.

A giant rainbow arch has been created as a tribute to key workers and to raise awareness about the importance of recycling, the four-metre-high installation aims to tackle litter and promote the infinite recyclability of aluminium drink cans.

Chris Latham-Warde, Every Can Counts UK Programme Manager, commented: "We've created this rainbow archway as a tribute to the infinite good that has been done by key workers across the country during the coronavirus pandemic. We owe so much to them for their continued work on the frontline to keep us safe and well and, of course, it's thanks to them that we've been able to keep recycling."



DO YOU NEED HYGIENE SOLUTIONS SUCH AS HAND SANITISING STATIONS AND GLASS SNEEZE SCREENS?

The Aluminium Federation has a hand sanitising station from SDI Displays. They reacted swiftly to at the onset of the pandemic and quickly designed and manufactured a range of hygiene solutions such as hand sanitising stations and glass sneeze screens.

In addition to this, their team of dedicated in-house creatives spend their days designing point-of-sale, VM and retail display solutions with a difference. They also specialise in creating bespoke workplace solutions such as reception areas, meeting rooms and catering areas.

Please contact Nicky Kenyon for more information:

Nicky.kenyon@sdisdisplays.co.uk
mobile: 0734 157 1593



COMING SOON: HIGH PRESSURE TESTING CAPABILITIES WITH OPTIONAL STEAM TO REPLICATE ENVIRONMENTAL CONDITIONS FOR MATERIALS AND COMPONENTS

Phoenix is currently developing the next generation of environmental chambers, capable of carrying out high pressure testing up to 100bar, to support the testing of new materials for a variety of industries including Aerospace and Nuclear R&D.

The complex system designed and manufactured by Phoenix can test at up to 100bar and withstand temperatures up to 1000°C.

The chamber is also able to carry out testing in a range of harsh environments, including corrosive gas, vacuum, oxygen enriched, and inert gas. There is also an option to add steam to the test environment to replicate the conditions that aircraft engines experience in flight, or to replicate environmental conditions for new materials.

For more information, please visit
www.phoenix-mt.co.uk



RECYCLED ALUMINIUM COULD HELP JAGUAR LAND ROVER REDUCE EMISSIONS BY A QUARTER



Jaguar Land Rover (JLR) has said that its ongoing project to recover and re-use aluminium from drinks cans and end-of-life vehicles into new car products could reduce its carbon emissions by up to 26%.

The company's REALITY project aims to recover aluminium from existing JLR vehicles and reform it to create new vehicles.

Gaëlle Guillaume, lead project manager for REALITY at Jaguar Land Rover, said: "This project has allowed us, for the first time, to recover premium automotive-grade aluminium from scrapped vehicles and re-use its unique properties. The potential of this on the production process is a reduction in CO2 impact as well as helping us re-use even more aluminium."

"As we move into an autonomous, connected and electrified future, with the potential of shared fleets being de-commissioned en masse, it could allow Jaguar Land Rover to engineer this closed loop recycling alloy into tight production schedules to further improve efficiency and environmental benefits."

The £2m project, co-funded by Innovate UK and in partnership with Brunel University, is helping Jaguar Land Rover extend its aluminium closed loop and recycling initiatives as part of Destination Zero.

Jaguar Land Rover has already reduced its global operating CO2 emissions per vehicle by 50.7 per cent since 2007 and says it remains committed to an ongoing decarbonisation process.

Between September 2013 and March 2020, around 360,000 tonnes of closed-loop scrap have been processed back into the brand's lightweight aluminium intensive architecture, across all vehicle lines including the Jaguar XE.

Source: TheBusinessDesk.com

BLOODHOUND EDUCATION NEEDS YOUR SUPPORT TO HELP US REACH VULNERABLE AND DISADVANTAGED PRIMARY AGED CHILDREN

Covid-19 has forced us to pause our visits to schools and activities at our Education centre. We have adapted by publishing free activities and experiments on our website but are aware that many may not have easy access to these on-line materials or afford to print them. We are developing a free, 16-page magazine filled with experiments, facts, puzzles and quizzes that can all be done at home.

#supersonic stem will be published monthly and each issue will focus on a different science and technology theme. It has the primary goal to reach and engage those children who may not have the opportunity to participate in activities through school during the pandemic. It will support teachers and parents with the on-going challenge of remote learning.

We are looking for sponsorship of the magazine for production and distribution costs. To get involved you can make a donation through our website: <https://bloodhoundeducation.com/support-us/donate/>. If you would like to sponsor an issue and have your company logo on the magazine please contact Kirsty.allpress@bloodhoundeducation.com. Thank you!



ALLUMETTE GROUP INVESTS IN GREEN FLEET

Allumette Group has invested in cleaner vehicles to support its efforts in minimising emissions and reducing its carbon footprint.

All company cars have been replaced with electric or hybrid models and the delivery fleet has been upgraded to low emission large goods vehicles (LGV).

The expenditure represents one million pounds worth of investment. The group has installed EV charge points at its premises on Yardley Brook Industrial Park in Birmingham, ensuring that both employees and visitors have access to the essential infrastructure required to run and maintain an electric vehicle.

The LGV fleet has been delivered in the new group livery. Allumette Group is the parent company of powder coater, Vertik-Al and louvre specialist, IKON Aluminium Systems.

Group managing director for Allumette Group, Angus Mackie, says: "We are committed to reducing the environmental impact of our businesses. This means exploring every opportunity for a greener and cleaner alternative.

"We are extremely pleased at how receptive our employees have been to the adoption of electric and hybrid vehicles. This is an investment which makes sense on many levels – environmental, financial and for the long-term well-being of our staff.

"The vehicle upgrades follow an extensive overhaul of our lighting system, last year. By installing 900 new lights we reduced our energy consumption by over 50% on traditional lighting and cut carbon emissions by almost 420kg. Similarly, the new fleet will have a positive impact on our footprint."

For more information visit:
www.allumetteld.co.uk.



SPONSOR SPOTLIGHT

GALLAGHER

Gallagher is one of the leading insurance brokerage, risk management, and human capital consultancy firms in the world.

With a truly global reach, our organisation employs over 33,000 people and our international network provides services in more than 150 countries – with over 70 offices serving our UK clients.

We partner with businesses around the world to provide relevant and impactful professional advice. We continue to build on 90 plus years of experience and have built a reputation for service excellence, competitive deal structuring and open and transparent relationships with our clients.

The Major Risks Practice (MRP) team consists of 60 people and has extensive experience ranging from straight forward insurance placement to the

use of captives, balance sheet funding and risk analytics – focussing on large and mid-range companies who require a sophisticated and bespoke risk management and insurance solution. Whilst we work with clients in a range of industries, we have particular expertise in the metals and heavy engineering sectors.

It is expertise that is always client focused: the same individuals you see at the first meeting will also manage your risks throughout your programme life-cycle. In addition to our service and broking teams, we have specialist Loss Control engineers with decades of collective experience in supporting some of the largest Ferrous and Non Ferrous metal manufacturers in the UK and Europe.

MRP are also fortunate to have their own Mergers and Acquisitions and Dispute Resolution teams. Our three-pillar approach – Insurance and Risk Management, Mergers and Acquisitions and Dispute Resolution will allow us to add value and benefit to ALFED members. We are very much looking forward to collaborating with ALFED.



Insurance | Risk Management | Consulting

ARZYZ METALS

Established in 1980, ARZYZ Metals is a Mexican company specialized in the manufacturing of aluminium alloys and the commercialization of non-ferrous metals in presentations such as continuous casting ingots, molten metal, slab, billet, T-bars, aluminium powder, flat-rolled products, deoxidizers as cones and granulates.

ARZYZ Metals has the objective of increasing its scrap metal recycling rate due the commitment it has of enhancing the circular economy in the aluminium industry. The company recovers scrap and by-products originated by its clients from sectors such as automotive, construction, steel, etc.

Towards its path of becoming a secondary smelter leader, the company is currently expanding its operations in Mexico and overseas, and it is open to establish strategic alliances into new markets.

www.aryz.com/en/ 

METAL COATING SERVICES

Metal Coating Services is East Yorkshire's longest established powder coating supplier and are adept at providing a quality product with an efficient service at a competitive price. They are an approved, architectural applicator and can offer 25/30 year warranties on architectural aluminium projects. They also offer plastic and nylon coating.

They have a proud record of building long, mutually beneficial relationships with their clients and working with them to meet their needs. Always looking to continuously develop and improve, they have recently completed a significant expansion on site, with additional plant and equipment included.

www.metalcoatingservices.com

 **MCS**
metal coating services

SKF AEROSPACE

SKF Aerospace in Clevedon is part of SKF Automotive and Aerospace. They occupy a site that covers approximately three acres and employs over 200 people. They specialise in the design and manufacture of self-lubricating PTFE/glass fibre lined bearings for both aerospace and industrial applications. Preferred for the most demanding applications, these bearings offer an exceptional load to mass ratio, combined with excellent resistance to fatigue and wear.

In the aerospace sector, the bearings are widely used in the airframes and flight control systems of fixed wing aircraft and helicopters, and in the industrial market in a huge range of applications including mass transit systems, high performance cars, military vehicles, and marine equipment.

www.skf.com



JENKS & CATTELL

Established in 1886, Jenks & Cattell Engineering are one of the most recognisable and established names in the metalwork industry, with owner's Newship Group providing financial and infrastructural backing for continuous growth and development.

Jenks & Cattell supply customers with metal pressings, laser-cut fabrications and welded assemblies from a 20,000sqm plant in the West Midlands. Aluminium usage in the industry has rapidly increased this decade with the automotive industry focussing on lightweight and economical vehicles.

Manufacturing metal components for OEM's end products puts Jenks & Cattell at the beginning of the supply chain, and they are currently assisting a world leading engine manufacturer with the design and manufacture of a new modular battery pack power system for an off-highway application. The project is almost totally manufactured from various grades of aluminium featuring flat and formed panels, along with sealed joints and has been supported from prototype stage for production readiness.

www.jcel.co.uk

 **JENKS & CATTELL**
ENGINEERING LIMITED

MULTI METALS

Multi Metals are a specialist supplier of bespoke aluminium extrusions, aluminium handrails and support grids, and standard aluminium sheet and extrusions.

They have a focus on quality to help ensure they deliver the highest standards of products and services to their clients, and that they meet the requirements of their clients.

They are a division of the Murray Metals Ltd group, a leading supplier of steel plate, profiling, long products, general steels, engineering bar, aluminium and processing services to customers around the world.

The group supplies products and services to the offshore and onshore energy sector, power generation, mining, construction, aerospace, transport and general engineering industries.

Other Murray Metals brand names include Murray Energy, Murray Plate and Profiles, Northern Steel Stocks, Tipton and Mill Steels, and Murray Multi Products.

www.multimetals.com

 **MULTI METALS**
BESPOKE ALUMINIUM SOLUTIONS



WHY JOIN THE ALUMINIUM FEDERATION

Whatever your company size or speciality within the industry, we help you access the technical expertise, market insight, business support and government influence you need to boost your competitiveness.

We offer different levels of membership based on your business size – so it's both affordable and valuable.

Contact us to discuss how ALFED membership can help your business.

T: 0330 236 2800

E: info@alfed.org.uk

 **ALFED**
ALUMINIUM FEDERATION

THE VOICE OF THE UK ALUMINIUM INDUSTRY



TRAINING ACADEMY

NAVIGATE THE ROUTE TO RECOVERY WITH ALFED

For centuries, the foundations of Britain's industrial might came from its apprenticeship structure which passed craft skills seamlessly from one generation to the next.

Unfortunately, the traditional route has seemed less clear in recent years. Employers weren't happy with the levy system, and there was also uncertainty about the roles of technical schools, city technical colleges, engineering academies and university technical colleges.



However, the government's new Plan for Jobs offers a simpler and more coherent vision about how companies can acquire the skills they need to navigate out of the Covid-19 maze.

ALFED's training and education manager, Kathy Romback, believes the new apprenticeship funding structure, which came into effect on August 1st, will be welcomed by employers and employees alike.





"To encourage companies to take on apprentices, the government will pay £2,000 for a new recruit between 16 and 24, and £1,500 for an older person. The money will go directly to employers in equal instalments, when the apprentice is still learning and has completed 90 days and 365 days," she says.

"There's no limit on the number of incentive payments which a company can receive, and as the scheme runs until the end of January 2021, we expect it to have a significant impact on job creation."

The rules about support for training for existing staff have also been clarified, with 95% of the finance coming from the government, and a simple sliding scale indicating where its funding will be capped.

An employer could receive up to £8,000 for a Level 4 apprenticeship, for instance, and up to £21,000 for a Level 7 MBA course, and their contributions would be just £400 and £1,500 respectively.

Kathy says employees can be any age from 16 upward, and points out that approved courses run from flexible apprenticeships and supervisory workshop skills, through mid-level programmes to evolve an

individual's skills and behaviours, right up to studies for first degrees and Masters.

"Naturally, the best way to help individuals realise their potential comes in many forms. The old approach to apprenticeships has changed, and the flexible programmes we have developed in partnership with our provider really will suit employees of any age and skill-set.

"Research by the Skills Funding Agency indicated that 80% of companies who invest in apprenticeships have a significant boost in staff retention levels, and pilot studies also demonstrate significant improvements in both productivity levels and job satisfaction - so everyone wins.

"I know lots of members will want to know more about how the Plan for Jobs programme and the apprenticeship programme can work for them, and also how we will deliver training schemes, so they can reach me either through my e-mail k_romback@alfed.org.uk or on the phone 0121 281 2281."





ALFED MANAGEMENT & E-LEARNING COURSES

With social distancing restrictions having a severe impact on every aspect of our lives, our online learning and webinars continue to help develop essential skills while working from home. These are unprecedented times that require new skills and ways of working.

SALES COURSES

- Half day LinkedIn for business workshop

Who is it for: This workshop is a must for business owners, managers, marketing and sales professionals.

What will I learn: How to use LinkedIn as a powerful sales and marketing tool.

When: 12 November 2020

Duration: Half day 9.30-12.30

Cost: ALFED members £99+vat/person – non members £149+vat/person

- Essential selling skills

The power of sales training and development can never be overstated. When done well, you will be hard-pressed to find a better way to empower your sales professionals or to increase their commercial performance.

Irrespective of your industry or sales training requirements, our courses can provide the solutions, deliver measurable results and help you achieve your sales goals.

Who is it for: Everyone who is interested in sales and wants to improve their selling skills.

What will I learn: Better understanding of the new world of selling, this course will give you the skills required to improve your techniques and help your confidence.

When: 1 & 2 December 2020

Duration: 2 x half days 9.30 – 13.00

Cost: ALFED members £249+vat/person – non members £349+vat/person

MANAGEMENT COURSES

- The effective team leader (Module 5 & 6)

The effective team leader has a variety of traits and characteristics to encourage team members to follow him. Team leaders naturally possess certain qualities such as compassion or learn leadership skills through formal training and experience. This workshop is a foundation on which a successful management career can be built.

Who is it for: Anyone who would like to update their management skills and those who are new to managing and require formal training.

What will I learn: Managing through people; building a team and knowing the team balance; effective communication, delegation and motivation; managing conflict, performance and development.

When: 21 & 22 September 2020

Duration: 2 days

Cost: ALFED members £560+vat/person – non members £660+vat/person

- The working organisation (Module 7 & 8)

Many people are promoted to a management role as a result of seniority, necessity or because they were good in their previous position. They are often required to make the step up without any or very little essential management training.

Who is it for: If you are looking to be a great manager, be able to motivate and inspire your team while juggling all of the complexities of helping ensure the business is run well and interpret the complex financial information which is constantly put in front of you.

What will I learn: If you are looking to take your career as a manager to the next level, our management course will give you the skills, tools and techniques you need

to highly effective, shape your future, transform your management and unlock your full potential.

When: 29 September & 13 October 2020

Duration: 2 days

Cost: ALFED members £695+vat/person – non members £795+vat/person

- The performing organisation (Module 9 & 10)

Who is it for: Those managing departments or team who take responsibility for delivering business objectives through other people. Also useful for managers who want to learn more about leading & managing and getting the best from their people. This course respects prior management and leadership experience whilst enhancing effectiveness. This course allows managers the opportunity to discover ways to markedly enhance the overall performance of their department, function or team and that of the organisation. Managers will examine the different elements to setting and delivering consistently high performance through different performance management systems and robust methods to uncover current performance strengths and shortcomings. Reflection on learning from the module will then be used to set out future performance targets that are actionable and measurable.

What will I learn: To develop a deeper understanding and comprehensive insight to performance management through traditional and contemporary measurement methods, and deep the measures can reach in your business.

To consider performance management systems and the service profit chain analogy. The benefits that the Balanced Scorecard and associated models could bring to your performance. To recognise the areas of business focus requiring development and delivery of enhanced performance.



Understand the purpose and basis of reflective leadership practices through setting some personal and team performance goals for the next 100 days.

When: 3 & 10 November 2020

Duration: 2 days

Cost: ALFED members £695+vat/person – non members £795+vat/person

• **The thriving organisation**
(Module 11 & 12)

Who is it for: Those managing departments or teams and who take responsibility for delivering business objectives through other people. Also useful for managers who want to learn more about leading & managing and getting the best from their people. This course respects prior management and leadership experience whilst enhancing effectiveness.

What will I learn: You will learn advanced processes for getting the best out of your people and how to apply them in your organisation. You will have the opportunity to practise a range of specific skills essential to leadership in today's turbulent business environment, through questionnaires, case studies, workshops, group discussions set in an open, hands-on, how-to-apply-it-today atmosphere. At the end of the course participants will appreciate the role of the strategic manager, have a clear understanding of strategic thinking and planning techniques, know how to maximise performance from others using leadership, communication, motivation, and teamwork, and be able to lead positive change more effectively.

When: 24 November & 8 December 2020

Duration: 2 days

Cost: ALFED members £695+vat/person – non members £795+vat/person

E-LEARNING

Research has shown that online learning is a highly effective way to learn. It gives you what you need, when you need it and wherever you are.

• **LinkedIn mastery**

Who is it for: If you are finally ready to get serious about using LinkedIn properly, then this online course is for you! Discover a system for using LinkedIn to generate a consistent pipeline of new leads and for building long-term, profitable relationships in your niche market. But why

should you use LinkedIn to generate a consistent pipeline of new business leads, build strong long-term relationships with your clients now?

- LinkedIn can move you beyond a large marketing spend
- LinkedIn can establish you as an authority in your market
- You can grow your network faster and more effectively
- You can leverage your results through understanding

What will I learn: This course is designed to allow you to learn and develop your skills in an easy and practical way. Over the next 7-weeks, you will grow your skills each week which will help you develop new connections, clients and leads.

When you know exactly how to use LinkedIn, you can achieve incredible and very easily measurable results. When you have the right system, you will have a strategic advantage in your niche market for generating more leads and converting more connections into clients more often.

When: Flexible E-Learning, start anytime

Duration: 7 modules over 7 weeks

Cost: ALFED members £450+vat/person – non members £550+vat/person

• **Advanced consultative selling skills**

Advanced consultative selling, also known as Rainmaker Selling, takes selling to the next level. It is designed to make sales work the way people buy, not the way you sell.

Who is it for: This course is for you if you want to become the best salesperson/business development professional in your market or the go-to expert for all clients who are serious about finding the right solution for their challenges.

What will I learn: This comprehensive program will teach you and your team how to lead conversations masterfully from the first touch point to an ongoing relationship. Our course will help you overcome a host of selling related challenges and unlocks all of the potential your market contains.

When: Flexible E-Learning, start anytime

Duration: 4 weeks

Cost: ALFED members £450+vat/person – non members £550+vat/person

• **Digital transformation**

The course will cover:

- How technology has changed our world of work
- The mechanics of disruption
- Digital trends
- The path to digital transformation
- Digital transformation success stories

Who is it for: Team Leaders, Managers and Business owners.

What will I learn: Digital transformation involves optimizing processes and making

workflows faster, easier, and more efficient because instead of spending hours processing paperwork, you can create digital workflows which increase efficiency and allow employees to focus on other activities.

When: Flexible E-Learning, start anytime

Duration: 4 weeks

Cost: ALFED members £450+vat/person – non members £550+vat/person

NEW COURSES COMING SOON

We will be launching a new series of online courses. These courses are all CPD accredited and certified by various accrediting agencies, including iirms, The CPD Certification Service and ILM.

All of these courses are fully online and the course material will be available to the candidate for 1 year after the completion of the certification period. The courses will include:

- Asbestos Awareness (RoSPA & IATP Approved)
- Manual Handling (CPD Approved)
- Basic Fire Safety Awareness (RoSPA, IFE & CPD Approved)
- Fire Marshal (RoSPA & CPD Approved)
- Fire Extinguisher (RoSPA & CPD Approved)
- Abrasive Wheels (IIRSM Approved)
- Working at Height (RoSPA Approved)
- Control of Substances Hazardous to Health (COSHH) (IIRSM Approved)
- Working Safely (RoSPA & IIRSM Approved)
- Workplace Health and Safety (IIRSM Approved)
- Working in Confined Space (IIRSM Approved)
- Introduction to Risk Assessment (IIRSM Approved)
- Electrical Safety (IIRSM Approved)
- Slips, Trips and Falls (IIRSM Approved)
- Noise Awareness (IIRSM Approved)
- Forklift Truck Supervisor Training (Coming Soon)
- Conflict Resolution in the Workplace (CPD Approved)
- Equality, Diversity & Discrimination in the Workplace (CPD Approved)
- Anti-Harassment and Bullying (CPD Approved)
- Sexual Harassment in the Workplace (CPD Approved)

Cost: prices start from £45+vat/person per course

For more information or to book a place please contact our training and education manager, Kathy Romback.

We offer a discount for bookings of three or more on these courses. Email: k_romback@alfed.org.uk. Tel: 0330 236 2800.





ALFED TECHNICAL TRAINING COURSES

INTRODUCTION TO ALUMINIUM – BEGINNER LEVEL

These webinars introduce and provide a broad basic knowledge of aluminium and its industry for support staff, administration, accounts, purchasing, for those who are progressing their careers into sales, marketing, manufacturing or quality roles and for new entrants into the aluminium industry assuming no prior knowledge of aluminium or understanding of manufacturing.

• Aluminium Light webinar – Module 1

Aluminium Light A webinar on aluminium as a strategic metal & a basic introduction for existing staff or new starters who don't have a technical background. This tutor-led interactive engaging session will highlight:

- Where aluminium comes from
- The processes used in industry
- Properties and applications of this material that has shaped our world
- Identifies each of the holistic properties of aluminium
- The basis of global demand for aluminium

When: 10 September

• Production of Aluminium and Global Demand – Module 2

This webinar will highlight:

- Sources of aluminium, how it is refined and produced
- Growth relationship with the availability of electricity
- Low carbon recyclability of aluminium
- What differentiates it from other materials
- Understanding how supply is matching demand

When: 24 September

• Wrought Aluminium and Applications webinar – Module 3

This module outlines:

- How aluminium alloys group specifications were developed
- Focusing on the properties of each alloy specification group, explains their uses and illustrates applications
- Concluding by dispelling myths on aluminium, fire and health demand

When: 1 October

• Heat Treatment of Aluminium webinar – Module 4

This module outlines:

- The difference between non-heat treatable alloys and heat treatable alloys
- How non heat treatable alloys are strain hardened and heat treatable alloys age hardened
- Understanding this module completes the understanding required to correct select alloys for applications

When: 15 October

• Elastic and Plastic Behaviour of Metals webinar – Module 5

This module outlines:

- Understanding how metals behave under load, and the applicability of the significant characteristics to product design
- How characteristics are determined/proved by tensile and/or hardness testing

When: 29 October

• Production of Wrought Aluminium webinar – Module 6

This module outlines:

- How plate, slab, shate, sheet and foil are produced and some of their innovative applications
- Introduction to product defects

When: 12 November

• Extrusion webinar – Module 7

The super-plasticity of aluminium at moderate temperatures sets aluminium apart from all other metals in its ability to be extruded. This module outlines:

- The extrusion process
- Exploring its potentials, product designs and applications
- A study of extrusion introduced defects

When: 27 November

• Drawing, Shaping and Forming of Aluminium webinar – Module 8

A broad survey of how aluminium is shaped, formed, manipulated, cut, fabricated.

This module outlines:

- How aluminium is joined and/or bonded
- Explaining the potential of emerging hot forming technologies
- Thought provoking technologies for the designers

When: 10 December

• Corrosion and Protection of Aluminium webinar - Module 9

This module outlines:

- Explaining what corrosion is and its various mechanisms
- Researches alternative coating and protection methods
- Ending with eye catching examples of coated architecture

When: 14 January 2021

• Casting technologies webinar – Module 10

More correctly liquid aluminium engineering, this module compliments both Modules 3, 7 and 8 by exploring how castings offer alternative manufacturing processes. This module outlines the



various techniques and their application to specific product applications.

When: 28 January 2021

The format of these modules is live, tutor-led interactive webinar and the approx. length of each is 40-45 minutes.

Cost: £33.33+vat/person. We offer a discount for bookings of three or more participants per webinar.

WORLD OF ALUMINIUM – INTERMEDIATE LEVEL

The World of Aluminium is an intermediate technical level course and is specifically designed for production engineers, process and quality technicians, stockholders, customer facing sales/marketing persons and material/product purchasing individuals. This course is aimed at individuals who require a solid basic understanding to confidently engage with the aluminium industry and its products.

The course creates a solid basic understanding of aluminium, aluminium metallurgy, heat treatment and metal forming processes. It assumes no prior knowledge of metallurgy, and is specifically tailored to the background, industry sector and jobs of the delegates. Care is taken at each stage to ensure complete understanding.

Technical elements are balanced with insights into the history of aluminium, its growth as the strategic metal of society, its sustainability properties and illustration of products, to create a holistic broad rounded knowledge.

This live, tutor-led interactive workshop will be delivered over two consecutive mornings via our zoom platform.

When: 6 October 9.30-12.30 and
7 October 9.30-12.30

Cost: ALFED members £199+vat/person –
non members £299+vat/person

ALUMINIUM FOR ENGINEERS – ADVANCED LEVEL

An intensive course that creates the foundation and builds up knowledge from basic introduction to metals to the wide application of aluminium. The 'Aluminium for Engineers' syllabus covers metallurgy, specification, heat treatment, wrought processing, joining, testing, corrosion, coating and more.

All participants get a complimentary copy of the Aluminium Federations' book 'The Properties of Aluminium and its Alloys'.

This course is aimed at metallurgists, designers, manufacturing engineers and companies transitioning into aluminium.

This live, tutor-led interactive workshop will be delivered over four mornings via our zoom platform.



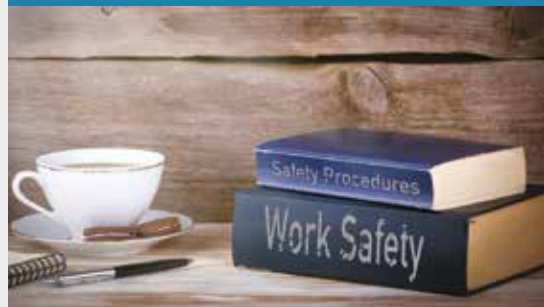
When: 24 & 25 November and
1 & 2 December 9.30-12.30

Cost: ALFED members £395+vat/person
– non members £495+vat/person

For more information or to book a place please contact our training and education manager, Kathy Romback. We offer a discount for bookings of three or more on these courses. Email: k_romback@alfed.org.uk. Tel: 0330 236 2800.

HEALTH & SAFETY

ALFED HEALTH, SAFETY & ENVIRONMENTAL SUPPORT GROUP



One of the most important inclusive elements of ALFED membership is the Health, Safety and Environmental Support Group.

This dynamic group meets at least quarterly and is open to all members of the ALFED. Members include H&S practitioners, engineers and operations personnel from across all ALFED companies underpinned by consultants and with active participation by the Health and Safety Executive and the Environment Agency, a veritable powerhouse of knowledge and support.

The group objectives are to identify, understand, share knowledge and best practice, to create safe and secure workplaces, that comply with legislation. We do this by identifying, reviewing and promoting health and safety standards within the industry to take a holistic approach, considering employee well-being, materials handling, hazards, culture technology, respiratory issues, safeguarding and much more. This will enable us to interact, advise and influence future legislation.

Our next quarterly meeting will take place in December. For more information please contact Margaret Lane at ALFED: Tel: 0330 236 2800 – Email: m_lane@alfed.org.uk.

ALFED HEALTH, SAFETY & ENVIRONMENT DAY

WHEN: Wednesday 21 April 2020

WHERE: Wolverhampton, West Midlands

ALFED
ALUMINIUM FEDERATION

A one-day conference with presentations on current issues and upcoming legislation, with exhibitions from HS&E supply and service providers.

For more information about the programme or exhibition opportunities please contact Margaret Lane at ALFED on 0330 236 2800 or email m_lane@alfed.org.uk.



FARO PROVIDE PRECISION WHEN THE 'HEAT' IS ON

When Alloy Heat Treatment (AHT) was established in 1974 it became the first UK company dedicated to the heat treatment of aluminium alloys. To satisfy ever increasing demands for its wide range of services, the Dudley, West Midlands based subcontractor has continuously expanded its facilities, invested in the best available heat treatment plant and increased its skilled workforce.

The busy company now operates 19 furnaces that provides the capacity to keep pace with customer demand. Now regarded as a technical leader in its chosen field AHT has the ability to heat-treat a wide variety of aluminium products, from sheet metal to large sand castings, ranging in weight from just a few grams to over 2.5 tonnes.

The NADCAP, AS 9100 accredited business, has achieved preferred supplier status with many aerospace primes and enjoys long term relationships with companies such as Rolls Royce, BAe and Airbus. In addition, AHT has assisted many automotive tier one and sub-tier suppliers in their adoption of aluminium in areas such as the integration of lightweight engine and suspension components. The company also enjoys a strong presence within the challenging motorsport sector and works with teams such as Mercedes and McLaren.

To complement its heat-treatment processes, AHT offers services such as solvent degreasing and dye-penetrant flaw detection. Also, as unwanted distortions can occur in intricate aluminium products due to the rapid heat transfer from the quenching process, the business operates a setting department that removes distortion in the treated condition whilst products remain ductile. To help further increase AHT's setting department precision capabilities and to speed-up the throughput of its important work, an advanced Quantum E ScanArm was recently purchased from FARO UK.

AHT Director Sales & New Projects Manager, Ian Perks explained. "Although all at AHT are committed to providing an efficient service to our clients and to remaining commercially competitive, the quality of the services that we provide and the premium standard of the heat treated components we deliver to our customers, are of paramount importance to us.

"As a vital aspect of our strict quality regime, we perform regular internal audits to ensure that we continually comply with the requirements of AS 9100:

Rev D (BS EN 9100: 2018) incorporating BS EN ISO 9001: 2015. We also use the data generated by our audits as the basis for making improvement to our quality management system.

"In addition to frequently investing in the best possible heat treatment plant, given the nature of our customers and the challenging technical demands they place on us, we also believe in regularly updating our important material testing and dimensional quality control equipment.

"Owing to the speed and precision an advanced ScanArm type device could provide, for many years we have felt that such a device had a part to play in our organisation. Therefore, as our workload grew, recently, we finally committed to placing an order. As we were aware of FARO's reputation for innovation and for being the market leader in this technology, we didn't consider purchasing any other brand of laser scanner.

"After considering several FARO models, due to its speed, ease of use and impressive accuracy specification, we chose the Quantum E ScanArm. Also, given that it will be used in a working environment, it helped our decision that the Quantum E has an impressive IP rating and is resistant to the ingress of dust and fluids.

"Given that this is our first FARO ScanArm, we sent two of our operators on a FARO course which enabled them to pick-up the fundamental of the FARO Quantum E and software. As our new FaroArm is now in daily use, our two trained staff members have quickly become competent in the ScanArm's use, and they will soon be training a further 5 members of staff in its use.

TECHNICAL

A vitally important aspect of our services is our first-class setting department, here, our skilled operators remove distortion from components following the quenching process. In addition to improving our precision capabilities in this area, our new Quantum E has considerably speeded-up these processes. The scans made by our new FARO equipment enables precise corrections to be made to components, then by re-scanning them, our staff are able to ensure that components adhere to customers' requirements. Also, as our setting fixtures are unable to detect the distortions that occur in a few of our parts, through the use of our new FARO ScanArm we can now guarantee that these parts will machine successfully."

FARO is recognised as the world's most innovative portable CMM manufacturer and for more than 35 years the company has designed and sold the most trusted metrology arm technology.

The QuantumE FaroArm, as purchased by AHT, represents the ideal portable solution for business that are looking for a cost-effective, user-friendly and efficient factory inspection system. The advanced FARO device has been tested to withstand the harshest shop-floor environments and to provide the accurate and reliable measuring results that give manufacturers

maximum confidence in their quality assurance processes.

When a FARO Laser Line Probe option is attached to a FaroArm, it becomes a super-efficient ScanArm, capable of delivering up to a remarkable 600K metrology points per second. AHT specified a FARO Quantum E ScanArm fitted with a Prizm Colour Laser Line Probe – the world's only colour laser line probe for portable measurement arms. When used in combination with the Prizm Laser Line Probe, the Quantum E delivers uncompromising levels of performance across all applications that require accurate colour point cloud data capture.

Reflecting FARO's leading position in the design and manufacture of measuring arms, Quantum FaroArms are the first Arms in the market that are certified against ISO 10360-12:2016 for articulated arms, setting a new industry performance bar, and ensuring maximum measurement consistency and reliability.

Given the size of AHT's facility and the requirement to occasional perform measurement and scanning routines in remote areas, it helped that the Quantum E ScanArm benefits from market-leading portability and speed of set-up. In addition, the use of dual hot-swappable

batteries supports prolonged cable-free operation, enabling the device to be used for extended period without the need for external power.

Matching the Quantum E's impressive speed of operation, the ScanArm's sophisticated new electronic design guarantees optimal wireless operation for scanning and probing, allowing gathered data to be transmitted via high-speed wireless methods across the entire manufacturing floor.

Ian Perks concluded. "So successful has our use of our new FARO Quantum E been, we now anticipate a much quicker ROI than we originally anticipated. In addition to proving to be the perfect choice for the measurement and scanning tasks we purchased it for, since using our new ScanArm, we have found numerous other uses for it across our entire site. It really helps that our Quantum E is portable and quick to set-up, as we are now looking to offer an efficient scanning service, not only to our heat treatment customers, but also to customers that require a scanning service without our heat treatment services."



ABM are the largest automotive brightware manufacturer in the UK, providing high quality polished items in Aluminium via manual and robotic polishing.

On site paint facility features

- 9 Axis robotic polishing cell
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- 4x AC tools, providing a high grade mirror finish, from as little as a 240 grit finish process.
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EasiBridge®

EasiBridge® is a pioneering innovation - the world's first truly user-portable, long-span rescue/assault bridge. 80% more compact than any incumbent system.

EasiBridge® uses aluminium ladders and novel engineering to span gaps up to 18m. Bridges formed from 1.5m x 7kg ladder sections.

"This really is a special system, continuing the British tradition of military bridge engineering innovation" – Think Defence 29/01/2018.

New capabilities are provided for emergency services, disaster recovery, mountaineering, force protection and infantry mobility – all backed with extensive International Patents.

EasiBridge® has been developed with ALFED and the UK Defence & Security Accelerator (DASA). It promises to be revolutionary.

GAP CROSSING SYSTEMS

EasiBridge® provides new access capabilities, both horizontally and vertically. "EasiLock" connections maintain rigidity across multiple ladder joints.

Simple spans, up to 6m, are formed from plain ladder sections. Longer spans, up to 18m, use underslung rope tensioning.



BRIDGE TYPE	BRIDGE WIDTH	LOAD RATING	SYSTEM WEIGHTS	FOOT TRAFFIC	QUAD-BIKE CROSSING
TAB {Tactical}	500mm	200kg	1.5kg/m of span	✗ {Trolley}	✓
IAB {Infantry}	500mm/ 1000mm	500kg	6-9kg/m of span	✓	✗
CSB {Support}	Unlimited	750kg	>12kg/m of span	✓	✓

To see the kit in action... <https://youtu.be/Z8hINYY4svo>

Short ladders are portable within building stairwells and can be launched from confined spaces for covert crossing between buildings - a unique, urban warfare, and emergency access capability.

IAB/CSB footbridges add decking and ladder handrails, creating stable platforms for foot-traffic & light-vehicles. Modular bridges of any width can be produced - load ratings exceeding 1 Tonne. EasiBridge packs to 10% of the size of the current Infantry Assault Bridge – optimizing both cost and logistics.

EXTENDED SUPER-KIT CAPABILITIES

EasiBridge® uses ladders as a common building block for a huge range of mobility, access and troop protection challenges. Ladders provide gap crossing, infantry carriage support, logistics handling, fence-breaching CASEVAC, troop protection, logistics handling, even man-portable SVBIED barriers. 12 capabilities all from one, common, "Super-Kit" of parts.



EasiBridge® SPECIFIC FEATURES:

Benefits to customer	Cheap, lightweight, user-portable, long-span bridging system. Treble the span range and half the weight of equivalent ladder systems.
Unique selling point	Components 85% lighter and 80% more compact than incumbent systems. Multiple capabilities – gap-crossing, force-protection, vehicle-mobility.
Benefits over rival systems	User-portable, including inside buildings. No mechanical plant or power to transport or install.

SUMMARY

A ground-breaking innovation, with multiple capabilities:

- Vertical climbing: urban access, compound- and tunnel-entry.
- Conveyor: ammunition, personnel and equipment movement into buildings. Also building materials.
- Tactical Assault Bridge: Patented cantilever launch/inversion technique.
- Emergency bridging: small teams crossing building-to-building, avoiding ground-level entry routes.
- Quad-bike bridges: 12m bridge carried on single quad. Capacity up to 2½ Tonne.
- Cover-protection: trench/bunker cover systems and SVBIED vehicle barriers.

COMMERCIAL OPPORTUNITY

EasiBridge® has been procured for British Army Trials:

"We are delighted to be supporting a UK innovator, turning new ideas into military capability and putting it into the hands of soldiers quickly for trials and testing."

Brigadier Kev Copsey, Head of Future Force Development.

Significant scale-up opportunity is anticipated with numerous products and extended capabilities nearing completion.

Company activity now exceeds a one-man operation.

Expressions of interest are sought from prospective licensees, manufacturers or investors.

Dr. SR Bright PhD BEng CEng MICE FInstRE
www.easibridge.com

ALUMINIUM AND FIRE

Combustion is a high temperature exothermic reaction between a fuel and normally oxygen, that reacts or oxidises the fuel to an oxide, often a gaseous product. Sufficient heat has to be applied to the fuel to convert it into a gaseous form and to ignite the oxidation reaction. Chemically, solid fuels have to undergo "Endothermic" pyrolysis to convert them into gaseous fuels whose combustion then supplies the heat for continued "Exothermic" combustion. An "Exothermic" combustion reaction is one that evolves heat, making combustion self-sustainable.

ALUMINIUM

Aluminium metal and all its alloys, in both solid and molten states, including all products forms, wire, extrusion, sheet and foil, are "non-combustible", meaning they do not burn or combust when exposed to fire. Solid aluminium is a non-combustible material and therefore inflammable, so cannot catch fire.

ALUMINIUM IN CONSTRUCTION

In Europe a series of fire disasters highlighted the importance of safety in the event of fire. The European Commission, supported by a Group of National Fire Regulators, proposed a completely new classification system, based partially on existing test methods, but partially, and critically for many construction products, on a completely new test, the so-called "single burning item" (SBI) test.

The European classification standard adopted in the United Kingdom as BS EN 13501-1 "Fire classification of

construction products and building elements", ranks construction materials in 7 classes with regard to their reaction-to-fire fire behaviour: A1, A2, B, C, D, E and F.

BS EN 13501-1:2007 Aluminium and Aluminium alloys (not in finely divided form) are included in those materials to be considered as reaction to fire Classes A1 and A1FL (non-combustible) as provided for in Decision 2000/147/EC.

Aluminium offers "No contribution to fire" as provided for in Decision 94/611/EC implementing Article 20 of Council Directive 89/106/EEC on construction products.

FIRE AND ALUMINIUM BUILDING MATERIALS

Aluminium alloys are 'non-combustible' as defined by BS 476: Part 4 and the 1974 SOLAS Convention (as amended).

Aluminium alloys are classified as Class 1 - providing the greatest resistance to surface spread of flame, under BS 476: Part 7: 1987 Method for the classification of the surface spread of flame of products.

Non-combustible materials are "any material which when tested to BS 476: Part 11 1982 (1988) does not flame or cause any rise in temperature".

BS 476: Part 3 covers external fire exposure roof tests and the classifications laid down in the standard range from AA to DD. The first letter refers to the fire penetration performance and the second letter to the surface spread of flame.

Aluminium and its alloys are rated AA, the highest possible classification.

Materials are also tested for fire propagation performance to BS 476: Part 6 (1989) and coating systems are taken into account. Aluminium achieves excellent ratings under this standard.

BUILDING REGULATIONS

Building regulations in England, "Fire safety: Approved Document B", additionally consider the propagation of fire, so consider both the spread of flames and the amount of heat added to a fire by the energy output of burning materials. Aluminium is Classified as A1 Non-combustible and does not flame or cause any rise in temperature".

COMPARISON OF TECHNICAL GUIDANCE DOCUMENT B CATEGORIES AND RELEVANT EN TEST REQUIREMENTS

National classification	Euroclass category	Safety level
Non-combustible	A1	 DECREASING FIRE SAFETY
Material of limited combustibility	A2	
Class 0	B	
Class 1	C	
Class 3	D	
N/A	E	
N/A	F	

For further information please contact Jan Lukaszewski at ALFED on 0330 236 2800 or email j_lukaszewski@alfed.org.uk.

THE VOICE OF THE UK ALUMINIUM INDUSTRY

ALFED quarterly magazine offers you a great opportunity to promote your products and services to key decision makers and influencers within the aluminium industry in the UK.

SCHEDULE:

Issue 7 – available 10 December 2020

Issue 8 – available 26 March 2021

Issue 9 – available on 27 May 2021

Issue 10 – available on 22 September 2021

Issue 11 – available on 8 December 2021

For more information please contact:

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ALFED
ALUMINIUM FEDERATION



During manufacturing of metallic materials by processes such as casting, welding and additive manufacturing metals go through solidification in order to produce the desirable shape and products. Even if further processing and finishing is required before the product is completed, microstructure resultant from solidification plays a significant role on the properties of the final components. Therefore, it is important to be able to control the solidification and also to predict the final microstructure.

A microstructure is usually defined by the entirety of phases, grains, defects and their morphologies, sizes, volume fractions, distributions, orientations, and crystallographic directions^[1].

During solidification, one of more phases nucleate and grow while specific interface morphologies can form. Such morphologies include dendrites, inter-dendritic features, eutectics, etc. Depending on the process conditions such morphologies can grow and form either into columnar microstructure (during directional solidification) or equiaxed microstructure (during free growth when there is no preferred orientation during solidification).

Solidification microstructures usually depend on the solidification rate; temperature distribution and temperature gradients; composition and solute concentration; and materials characteristics such as crystallographic orientation, nucleation and growth kinetics of phases and capillary forces. It is important to be able to engineer the component from the microstructure scale to achieve desirable properties. Such approach requires gaining a deeper understanding of the microstructure and learning how it evolves during solidification. Such knowledge can enable microstructure control and



microstructure predictions, through employing numerical models that are appropriately designed and validated using controlled experimentation.

Currently there are some established theoretical models to predict microstructural features of hypoeutectic aluminium alloys; however, fewer investigations are undertaken on hypereutectic alloys and how their primary phase nucleates there. A research has been undertaken on solidification modelling of hypereutectic aluminium-silicon alloys which looks specifically at primary silicon nucleation and presents a method by which their size and microstructural features can be predicted using processing conditions. Findings of this work is planned to be published later this year by Dr Faraji.

Such expertise in solidification and modelling background and further assistance from utilisation of advanced characterisation facilities (with high resolution) based at Coventry is now leading us to focus on additive manufacturing (AM) of aluminium alloys for laser powder fusion techniques. Based on the experience of casting of hypereutectic aluminium-silicon alloys, our current interest lies with powders of high silicon content. AM offers a unique route for processing and manufacturing near-net shape of a class of aluminium alloys that are difficult to machine due to high level of silicon content. However, they are attractive alloys for many applications including automotive due to their high stiffness, high hardness, and low thermal expansion. We are interested to study the role of Mg and Si content on the process and hence optimise the process by investigating the solidification of this

process which inherently leads to a high solidification rate. In addition to works on solidification of aluminium alloys; below is a summary of other recent research activities relating aluminium at our institution:

At Coventry University, research in recent years at Structural Integrity Research Group has been directed towards improving understanding of laser shock peening and its effects in aerospace applications. The work, led by Prof Fitzpatrick, has encompassed determination of residual stress following laser shock peening, and the effect of laser shock peening on fatigue life improvement of aerospace aluminium alloys, specifically in section thicknesses relevant to use in fuselage and wing skin components. The project uses advanced experimental techniques for the characterisation of residual stress in the components; and the direct evaluation of improvement in fatigue life after laser shock peening.

In addition to research undertaken on aluminium alloys engineering in Coventry, our colleague, Dr Garcia-Perez at Research Centre for Business in Society (CBiS) who is specialise in cyber security management, works closely with Future Aluminium Forum to support the digital transformation strategy of the sector, particularly in relation to the adoption of the principles of cybersecurity management. He also contributes to the current debate on the impact of the COVID-19 pandemic on Aluminium manufacturing through AlCircle, the aluminium-based information portal known to the sector as the Virtual Aluminium Ecosystem.

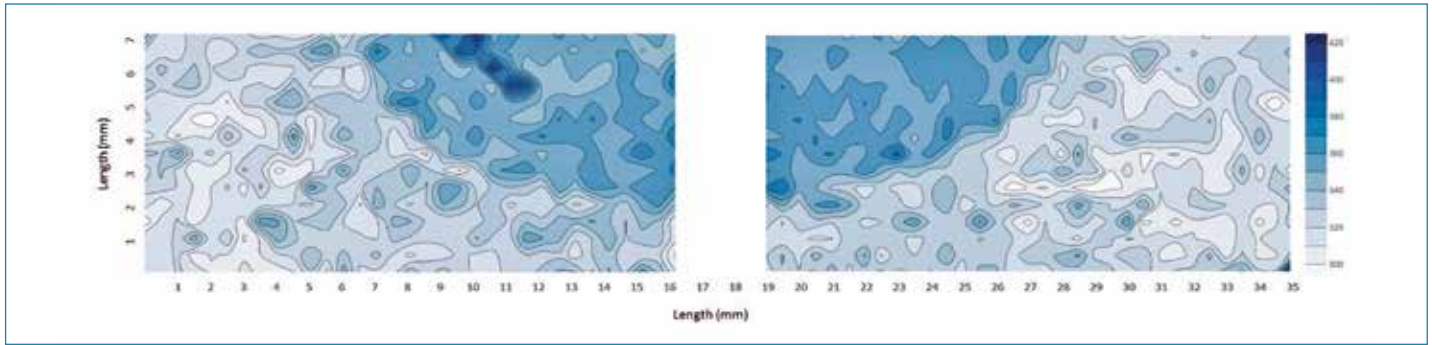


Figure 2: Another technique characterising metallic samples, particularly welded sections, is our advanced automated stage microhardness testing machine which enables mapping a pre-selected metallic bulk. The images above show the contour mapping of bulk hardness from welded Ti6Al4V plates joined by friction stir welding.

In addition to her research at Institute for Advanced Manufacturing and Engineering of Coventry University, Dr Faraji, a lecturer in Coventry University, is currently leading a module entitled "Manufacturing Technology and Materials", which is taught to all first year undergraduate students enrolled in the Mechanical Engineering, Motorsport and Automotive Engineering courses at Coventry University. She would like to take this opportunity to thank Mr Jan Lukaszewski, a Technical Manager at The Aluminium Federation (ALFED), who has kindly accepted and given four guest lectures on "Introduction to Aluminium Alloys" to our

students enrolled on this module. These lectures given over a two-year period, all well received and acknowledged as very informative and engaging by our students.

Reference

[1] W. Kurz, Solidification Microstructure-Processing Maps: Theory and Application, *Advanced Engineering Materials*, 2001, 3, No 7, 443-452.



Figure 1: (Above & opposite); One of our advanced characterisation equipment for studying microstructure is our FEG-SEM Zeiss with EBSD and EDS.

WORKING WITH GOVERNMENT



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During the week there will be more than 40 events taking place including country briefings, interactive seminars, workshops and the opportunity to explore supply chains.

In addition, the event will offer a platform for delegates to market their products and services to enable business matching, collaboration and one-to-one networking.

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- Workshops and training
- Business matchmaking
- 1:1 networking
- Collaborative opportunities
- Market specialist support
- New business contacts
- Sales opportunities overseas
- Enhanced company profile
- Increased sector and market knowledge
- Interactive b2match platform

Register for free

www.automotive-export-week-2020.b2match.io/



Department for International Trade



“Back in the 1960s we were the first company to apply powder to aluminium in the UK,” says John Park-Davies, director of Vertik-Al, “...today, we remain committed to innovation and progress with three horizontal lines and the UK’s first vertical powder coating line.”

As a specialist powder coater, Vertik-Al originally offered 64 colours – an impressive figure for 1966; this has grown to more than 3,000 colours in 2020. This doesn’t include the vast selection of finishes and textures that customers can also choose from, including metallic and stone.

“We generally use around 400 colours regularly,” continues John, “...working with global powder companies, including AkzoNobel, Synthapulvin, Axalta, IGP and Tiger to name a few, we can respond to the most elaborate of requests, coating aluminium to complement all manner of products, and architectural styles and features.

ARCHITECTURAL SPECIALIST

Nowadays, Vertik-Al is fortunate to powder coat millions of linear metres of aluminium product for an abundance of industries, including construction, rail, automotive and industrial sectors. In the beginning, it was a reputation for powder coating architectural aluminium which won the business industry recognition.

One of the first architectural coating projects was the iconic Dun & Bradstreet building in Buckinghamshire. Since then Vertik-Al has been involved in coating some of the world’s most important structures, including 1 Tower Bridge, London; Apple, Sweden; Olympic Village, London 2012 and Wembley 447, London.

EFFICIENT INVESTMENT

Vertik-Al has been based out of a purpose-built facility in Shard End, Birmingham on a 3.4-acre site since 1991. This location provides easy access to the Midlands motorway network.

In recent years, the facility has benefited from a major investment programme. Most notably, improvements have been made to offset the environmental impact of the powder coating process and reduce the company’s carbon footprint.

LED (light-emitting diode) lighting has been installed throughout the production, warehousing and office space, over 13,000m² in total. “We have invested

in over 900 replacement lights,” says John, “...helping to reduce our energy consumption by over 50% on traditional lighting. We have also cut our carbon emissions by almost 420kg.”

Productivity and environmental efficiencies have been further improved over the past 20 months with the installation of two new powder coating plants. The Magic Compact horizontal lines improve powder consumption and efficiency.

“The quality of the application and finish of matt, gloss and textured coatings is excellent,” continues John, “...while the advanced automation of the powder recovery circuit delivers the fastest colour change in its class. This investment is proving extremely beneficial to the business and our customers.

Just last month, Vertik-Al invested in new spray guns for the remaining, third



HISTORY OF VERTIK-AL

horizontal line; three per side and two hand-held guns for specials and shapes that require additional cover. This is alongside upgrades to the vertical line and additional changes to the booth on line two.

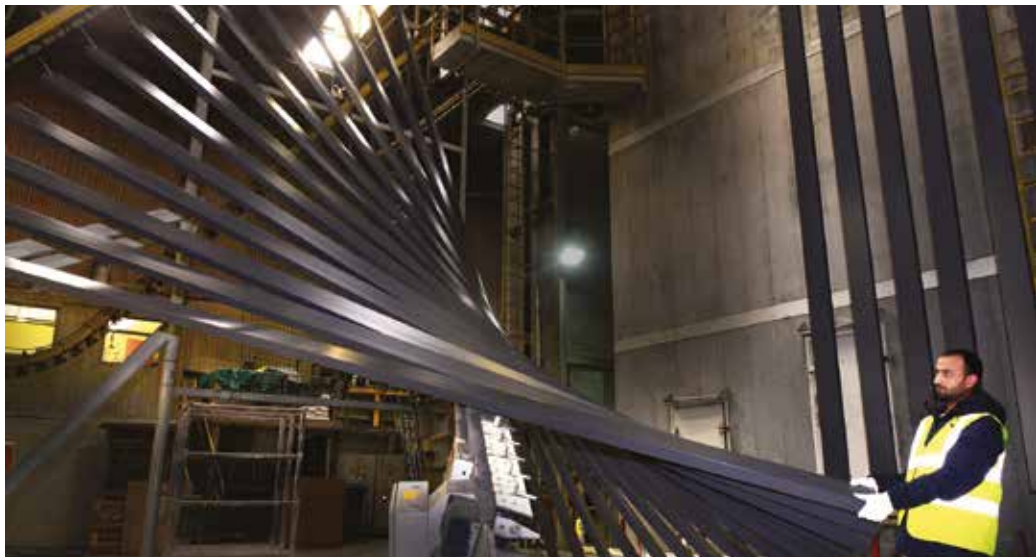
QUALITY & CERTIFICATION

Consistency and quality are essential if a powder coated product is to have impact and achieve the desired look and longevity," says, John. "That is why we are committed to quality and carry relevant and respected certification."

Since 1994, Vertik-Al has been the only applicator in the UK and Ireland to hold the GSB International quality seal for Approved Coated Aluminium, for example. "The GSB International quality seal, coupled with the QUALICOAT licence, means our customers can be confident that all the materials leaving our factory are of the highest standard," continues John. Both require stringent controls, checks and often, random audits; giving peace of mind and reassurance to the supply chain.

ALFED MEMBER

Through its QUALICOAT licence, Vertik-Al became aware of the Aluminium Federation (ALFED), a secretariat for



QUALICOAT UK & Ireland, and joined its membership in 2018. "We greatly value many aspects of being an ALFED member, including networking with like-minded companies; access to research; advocacy; government lobbying etc. The ALFED team are always on hand to assist and support us when required," concludes John.

Today, Vertik-Al is managed by a proactive board of directors following its acquisition

by an investment group in March 2017. It employs around 180 people from the local area, with some members of staff serving for over 25 years.

To discover how your business can benefit from Vertik-Al's knowledge, investment and over 50 years' experience in powder coating, visit www.vertik-al.com.



We are aluminium

In the United Kingdom Hydro are certified according to both the ASI Performance Standard and ASI's Chain of Custody Standard. ASI's Performance Standard recognizes the responsible production, sourcing and stewardship of aluminium. It is complemented by the Chain of Custody (CoC) standard, which sets out requirements for the creation of a chain of custody for CoC material, including ASI Aluminium, which is produced and processed through the value chain into the downstream sectors.

"This is a milestone for us in our sustainability agenda and in our strategy to help our customers document that they offer aluminium products that are sourced and produced responsibly throughout the entire value chain," says Paulo Geraldès, vice president responsible for the UK organization.

Hydro's UK aluminium manufacturing plants are certified according to both the ASI Performance Standard and ASI's Chain of Custody Standard



At Hydro, we are continually developing our sustainability initiatives and we believe that, among other, post-consumer scrap is key for the circular economy. Having local production and remelting allows shorter distance, closeness to the market and more efficient recycling of end-of-life scrap.

Hydro's extrusion organization in the UK manufactures and markets extruded aluminium profiles and offers surface treatment and added-value fabrication to transform the profiles into the solutions that meet customer specifications in the transportation, automotive, general engineering, and building and construction industries.

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With the coronavirus situation causing issues for businesses across the UK, many employers may be faced with the very real prospect of making staff redundant. However, before going forward with this, there are some key areas to bear in mind.

Croner, ALFED's trusted HR partner, highlight these below. For further advice on redundancy, or wider HR matters, call the dedicated member support line on 0844 561 8133 and quote ALFED member number.

Reducing working hours

Due to a decrease in business demand, consider if staff could be asked to work fewer hours in order to help the company save costs. However, bear in mind that if the employer is not permitted to make such a change by a term in a contract of employment, which is unlikely, staff will need to agree to the change. Although they may not be overly enthusiastic at the prospect of reducing their hours at first, they may be willing to agree to it if the alternative is redundancy.

Freezing training budgets

If the company is spending large amounts of money on training, another way to save costs is to temporarily stop training provisions. Although modern day workers value the opportunity for development in their roles, it should be made clear that this is only temporary until the business is in a healthier situation. Employers should take care if staff are engaged as part of a training contract, as removing the training part of their role could lead to a breach of contract claim.

Freezing pay

Many companies may offer annual bonuses as a way of rewarding staff and keeping their morale high. Another cost cutting option could be to try and not provide these in this particular financial year. However, if employees are entitled by contract to benefit from this, not providing these payments could again be a breach of the contract. That said, if there is a discretionary clause in there,



which outlines that these payments will only be made if business need permits it, employers could seek to rely on this.

It should also be remembered that if bonuses have been paid for the last few years, employees may be able to argue that they have received the bonuses enough times to establish a custom or practice, meaning they could be entitled to receive it this year even without a contractual clause.

Introducing flexible working arrangements

Employers may be considering if redundancy procedures can help them to reduce the number of staff that will be in the workplace, and therefore assist in social distancing measures. However, flexible working offers an alternative to this. For example, staff could be permitted to work from home on a more permanent basis or, alternatively, shifts could be staggered to reduce numbers in the building at any one time.

Voluntary redundancy

If employers wish to proceed with a redundancy procedure, they will need to ensure that they follow the correct process. One key aspect of this is demonstrating that alternatives to compulsory redundancies have been considered, which can include offering voluntary redundancy to staff. This invites staff to put themselves forward for redundancy and therefore help employees who do not wish to be made redundant avoid this. Ultimately, it is down to employers who they permit to be made redundant. That said, they should be prepared to consider these requests.

This year, the world of business has changed in a way that no one could have anticipated.

Now more than ever, your ALFED membership can help your business to recover, adapt, and thrive in the new reality of the working world. In partnership with Croner, we are proud to give you free access to all of the below resources.

COVID-19 SUPPORT

The pandemic has presented new challenges you are likely to have never faced as an employer before. You now have instant access to advice on:

- Being COVID-19 secure
- Understanding furlough
- The Job Retention Scheme
- Risk assessments
- Amending policies and contracts
- Flexible working requests

HR & EMPLOYMENT LAW

- Sickness & absence
- Redundancy
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GRANTS FOR MANUFACTURERS

By: Stuart Jackson, Innovation Policy & Grants Manager, Ernst & Young LLP

Government grants. We've heard a lot about them in the past few months as the UK Government has tried to limit the negative impacts of COVID-19. Behind the headlines there has been a sustained push to increase the amount of grants for businesses.



to be over £250,000 and companies can receive more if the site of the project is in an assisted area.

Deadline: 28 October 2020

Winning grants is a specialist task of articulating business opportunities in a way that makes sense for government investment. It's important therefore to have a good lead time to plan funding applications, align financial, legal, technical, and strategy teams to ensure a strong application and importantly a smooth delivery of a funded project, and being aware of upcoming funding is a key first step.

We wish ALFED members good luck with the current funding rounds and we will continue to support companies using grants to enhance their competitiveness in these uncertain times.



In his March Budget, the Chancellor announced a target of £22bn a year of spending on R&D. The Government has been funding R&D aligned to its Industrial Strategy since 2016 with dedicated funding for manufacturing. In June, further support was signed off giving support for manufacturers to be more energy efficient.

Some ALFED members support multiple sectors. It's important to remember that each sector (e.g. automotive) has funding to encourage manufacturers to work in tandem with customers to bring new innovations to market faster.

At Ernst & Young, we take a holistic view of companies and look at incentives that support companies' innovation ambitions. Grant funding can often be used for three parts of a business; its product development, the manufacturing processes, and development of assets (buildings and workforce).

After considering the vertical market segments, and the three parts of the business that are relevant for grants, we are able to identify suitable grants for individual companies.

At EY's webinars for ALFED members, we outlined a range of the relevant funds. Below are details of two of the key opportunities with deadlines in October.

• MANUFACTURING MADE SMARTER

This fund will support companies in undertaking feasibility studies and industrial research looking to use digital technologies to improve data flow across supply chains. This can include supply chain design or supply chain delivery. Projects can be up to £3m in size and funding.

Deadline: 7 October 2020

• THE INDUSTRIAL ENERGY TRANSFORMATION FUND

IETF will fund feasibility studies and technology deployment projects. The fund is designed to help manufacturers improve the energy efficiency of industrial processes. Projects need

BUSINESS CONTINUITY MANAGEMENT

We live in an unpredictable world, where disruptions can impact an organisation at any moment. All organisations must be prepared to respond to an emergency, disaster or crisis and have pre-planned strategies in place that enable them to recover from the effects of such situations in as timely a manner as possible. In this article, Gallagher looks at how business continuity management can help in these uncertain times.

Business Continuity Management (BCM) helps increase organisational resilience by identifying priority activities, developing suitable strategies and solutions for continuity following disruption and allocating necessary resources to minimise the impact of disruption.

The outbreak of the global COVID-19 pandemic in late 2019 led to many organisations referring to their Business Continuity Plans (BCPs) for guidance. Many found that the analysis carried out to develop and document BCPs was extremely useful, even if specific continuity strategies for responding to a pandemic had not been considered.

Even organisations that have invested heavily in BCM need to ensure arrangements have been put in place for responding to a pandemic, in particular recognising that many restrictions on normal life could be imposed by local and national governments.

BCM PROCESS

In order to develop BCM arrangements consistent with good practice, organisations should follow a standard process.

Business continuity lifecycleⁱ

Policy and Programme Management

- Establishment of the organisation's BCM policy
- Alignment with the organisation's strategic objectives
- Defines how the BCM system will be implemented

Analysis

- Business Impact Analysis
- Risk Assessment

Design

- Identification and selection of business continuity strategies and solutions

Implementation

- Development of business continuity plans (BCPs)
- Includes response framework and structure

Validation

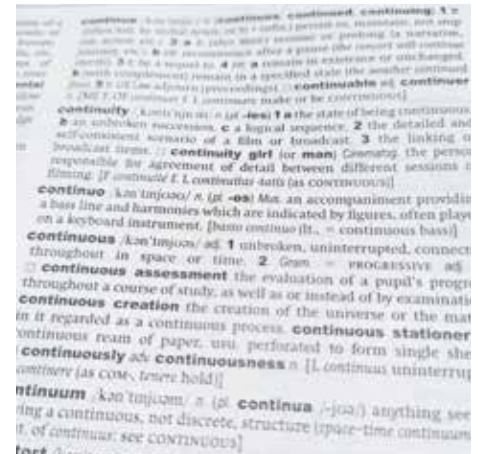
- Testing and exercising BCM arrangements
- Maintenance and updating
- Management reviews and audits

Embedding

- Integration of BCM into 'business as usual' culture of the organisation
- Inclusion of BCM considerations in any organisational change

Particular key aspects of this process that require additional effort when planning for a potential pandemic are the analysis and design stages. The following ten-point plan should be incorporated into any previous BCM thinkingⁱⁱ.

1. Ensure you are clear on the organisation's priority activities (time-critical) in the event of loss of resources.
2. Prepare for unexpected absences, particularly in priority roles (i.e. identify cross-trained staff, succession plan where possible).
3. Modify policies to give greater flexibility to normal working arrangements.
4. Establish and confirm welfare policies.
5. Reinforce internal peer support or other welfare mechanisms such as employee assistance programmes and occupational health support.
6. Implement a clear and regular communication strategy across the organisation.
7. Ensure the workplace has adequate supplies of cleaning and hygiene products.
8. Communicate the pandemic continuity strategy across the organisation.
9. Assign someone in, or close to, the leadership team to monitor official information sources, advice and assistance from government, health and other relevant agencies.
10. Avoid use of social media as a source of trustworthy information, and reinforce this to employees.



HOW CAN GALLAGHER HELP?

- Reviews and gap analyses of existing arrangements
- Business continuity and pandemic plan development
- Testing and exercising of current plans and teams
- Bespoke training in all BCM subject areas

For more information, please see links below:

www.ajg.com/uk/news-and-insights/2020/june/business-continuity-management/

www.ajg.com/uk/risk-management/business-continuity-planning/

www.ajg.com/uk/corporate-insurance/crisis-management/crisis-resilience-insurance/

The Major Risks Practice of Gallagher are a Sponsor at ALFED. For more information, please contact Bill Makin, Executive Director at Major Risks Practice: Bill_Makin@ajg.com.

ⁱ Adapted from the Business Continuity Institute - Good Practice Guidelines

ⁱⁱ Adapted from Business Continuity Institute - Pandemic Resilience – A Continuity Perspective February 2020



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In addition to a comprehensive range of familiar finishes and textures, 55HX® is suited to **sublimation printing**, a process where full colour graphics or photographs can be transferred direct to the material providing almost limitless creativity to designers and specifiers.

Also available treadplate, aluminium extrusion, handrailing, polished stainless steel sheet and painted aluminium.

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