

ALUMINIUM NEWS

THE VOICE OF THE UK ALUMINIUM INDUSTRY

ISSUE 15 DECEMBER 2022



• CELEBRATING
• ALFED'S PAST
• AND LOOKING
• TO THE
• INDUSTRY'S
• SUSTAINABLE
• FUTURE

• 6

• POTHOLES ON
• THE ROAD TO
• NET ZERO

• 11

• WHERE TO
• BEGIN WITH
• ROBOTS

• 17

• HOW
• SENSOR-BASED
• SORTING
• TECHNOLOGY
• IS DRIVING
• ADVANCES
• IN E-SCRAP
• RECYCLING

• 18

• NEW CARBON
• FOOTPRINT
• CALCULATOR
• ADDS UP FOR
• PROFESSIONAL
• POLISHING
• SERVICES

• 21

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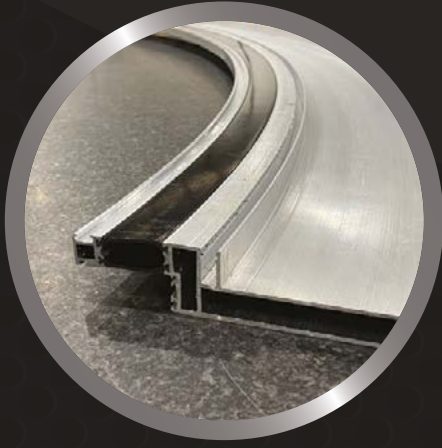
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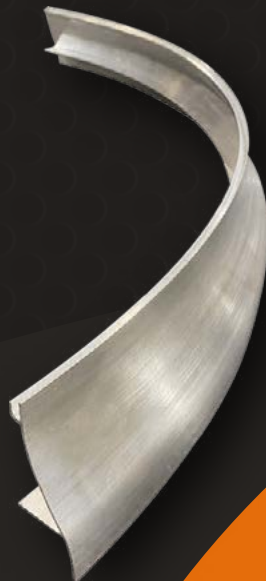
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CONTENTS

WELCOME TO OUR MEMBERS

City Metals Recycling	3
Euro Quality Coatings	3
Total Metal Recovery	3
#HowToRobot	3
Professional Polishing Services Ltd	3
Kestrel Powder Coating	3

ALFED MEMBERSHIP

Membership moments	4
Benefits of becoming an ALFED member	5

ALFED NEWS

Celebrating ALFED's past and looking to the industry's sustainable future	6
---	---

INDUSTRY NEWS

KidsOut Question of Sport Birmingham	8
Industrial Energy Transformation Fund (IETF) Phase 2: Closing January 2023	9
Investments in sustainability: EMR's improvements to its facilities throughout the capital	9
Decarbonising the foundation implications for worker skills	9

SUSTAINABILITY

Potholes on the road to Net Zero	11
----------------------------------	----

TECHNICAL

Aluminium Finishing Systems	12
Why Specify QUALICOAT for Residential Installations?	15
Impression Technologies and fischer group witnessing significant interest from the automotive sector for aluminium light-weighting using HFQ® forming technology	16
Where to begin with robots: de-mystifying the path to automation	17
How sensor-based sorting technology is driving advances in E-scrap recycling	18

ENERGY

New Carbon Footprint Calculator adds up for Professional Polishing Services	21
---	----

ALFED DIRECTORY

Members, Suppliers & Knowledge Partners	23
---	----

DIARY DATES

JANUARY

26 • ALFED Finishing Sector Group

FEBRUARY

23 • ALFED Distribution Sector Group

MARCH

7 • Parliamentary Breakfast Briefing

16 • ALFED Board Meeting

JUNE

08 • ALFED Board Meeting

08 • ALFED Annual General Meeting

20 • House of Lords Lunch

SEPTEMBER

12 • ALFED Board Meeting

13-14 • UK Metals Expo

19 • Parliamentary Breakfast Briefing

DECEMBER

6 • ALFED President's Dinner

7 • ALFED Board Meeting

FOR MORE INFORMATION PLEASE VISIT:

EVENTS:

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

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www.alfed.org.uk

Cover image courtesy of Novelis Latchford, providing sustainable and low carbon solutions to the UK automotive and beverage can sectors.

CITY METALS RECYCLING

City Metals Recycling are a scrap metal yard conveniently located in the heart of London and within easy reach from the A406. Established in 2000 they have built an exceptional reputation based on experience, reliability and trust with their customers which keeps them coming back time and time again.

They offer scrap metal recycling for ferrous and non ferrous metals and produce all grades for metal smelters both in the domestic UK and international markets.

www.citymetalsrecyclingltd.com/



EURO QUALITY COATINGS

Euro Quality Coatings is one of the UK's leading powder coating companies, EQC use the highest quality application equipment, powders and pre-treatments, providing a professional powder coating service for volume and batch manufacturers.

They serve a wide variety of industries including automotive, architectural, building products, road, rail, leisure, retail, medical and office products. Their strength is the strong partnership that they provide to their customers with many seeing their powder coating service as an extension of their own facility. They also offer a chemical and thermal paint stripping service.

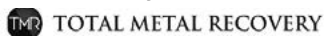
www.euroqualitycoatings.co.uk/



TOTAL METAL RECOVERY

With over 35 years of experience in the scrap metal industry, they're the Midlands leading metal recycling yard. Their aim is to provide the highest level of service along with the best prices for your unwanted scrap metal. They offer a range of services to support you with recycling scrap metal throughout the West Midlands.

www.totalmetalrecovery.co.uk/



#HOWTOROBOT

Whether you are in the market for a specific solution or want to get started with robotics, they connect you to a large network of robot suppliers who will help you get the job done.

They started out as advisors back in 2017. They were helping companies figure out their robot potential, do their business cases and finding the right suppliers for their needs. It very quickly became obvious to them that buyers were struggling with finding the right place to start. And it was hard to find suppliers with experience in the particular field of the buyer.

So, they set out to structure these deals, create a world map of suppliers and make tools for buyers and sellers to find each other in a smarter way. This is #HowToRobot – officially launched in 2020.

www.howtorobot.com/



KESTREL POWDER COATING

They are a specialist powder coater of metal products, supplying high quality finishes in a wide variety of RAL and BS colours throughout the UK.

Only high grade polyester powder paints are used for their coatings. Finish choices are gloss, satin (semi-gloss), or matt, depending on the colour. The pre-treatment process is selected to give the best bonding of the coating to your metal.

Their continuous track means they can handle long material such as aluminium extrusions and steel roller-shutters and the size of our pre-treatment tanks allows lengths of up to 7 metres to be powder coated.

www.kestrelpowdercoating.co.uk/



WHY JOIN THE ALUMINIUM FEDERATION

THE VOICE • OF • THE • UK • ALUMINIUM • INDUSTRY

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.

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e: alfed@alfed.org.uk

PROFESSIONAL POLISHING SERVICES

Professional Polishing Services Ltd is the UK Market Leader in polishing stainless steel, aluminium, brass, copper and bronze. They polish sheet, plate, coil, flat bar, sections, profiles, balustrades, laser cut panels, square and rectangular tube to a variety of finishes.

Their senior management team has over a hundred years experience of stainless steel polishing. Their product processing range is the largest in the UK. With a sales team who are friendly and knowledgeable they can deal with your enquiry as soon as you call.

www.professionalpolishing.co.uk/



MEMBERSHIP MOMENTS

Having already been immersed in the aluminium industry for the last 10 years, I'm very used to keeping my safety boots at the ready and visiting plants up and down the country; so, I am looking forward to getting out to see new and existing members now that we can all meet happily in-person again.

The UK Metals Expo came at the perfect time in September and provided a great meeting place for ALFED and our members, as well as other companies from across the metals supply chain.

It also looks like it will be bigger and better in 2023 and we are already in talks with the organisers to make sure there are as many opportunities as possible for ALFED members to access all areas and benefit from a generous 20% exhibitor discount.

The Aluminium Trade Fair in Düsseldorf, Germany was also back with a bang, after disruption from the pandemic meant that the last event took place in 2018. I went prepared with comfortable shoes for the three days and it was great to see so many ALFED members representing the UK aluminium industry across all the halls. Again, having worked with the organisers of this prestigious event for many years, I am keen to explore more ways in which our members and suppliers can be involved in 2024.

After the travel commitments had subsided and I wondered how I used to do this even more often 'pre-COVID', the first stop was to visit long-term members, Steel & Alloy Gonvarri Industries, and enjoy a tour organised by Helen Houareau-Smith, Aluminium Commercial Manager, around the Union Street site and the new Popes Lane facility, which opened in 2018.

The opening of Popes Lane allowed S&A to convert lines at Union Street from Steel to Aluminium and 2020 saw the installation of the Electro static dry coating film line. The company has capabilities for slit coil, rectangle, trapezoidal and shape blank processing of aluminium.

With more than 25 new members joining the ALFED books in 2022, it is also important to get to the bottom of their reasons behind joining and work to ensure they have access to all the membership benefits on offer and make the most of them.

MG Metals is one of ALFED's most recent recruits and it was great to meet with Managing Director, Peter Jerome, and the team at the site in Romsey, on a beautiful, sunny, autumnal day. Having recently moved into an additional unit, the company now has even more space for its on-site processing facilities, which include aluminium plate saws, extrusion saws, bar saws and a guillotine saw.

Last month also saw the biggest member event of the year – the Annual Dinner and Business Briefing at Tortworth Court. With it being ALFED's 60th Anniversary, there was even more to celebrate, and I enjoyed an evening of entertainment and great company. While the gin distillery, who's samples we all enjoyed so much last year, were unfortunately unable to join us, I am sure as it was a big birthday, the champagne was flowing instead!

Nadine Bloxsome,
ALFED Membership and Sustainability Manager

Tel: 07778 688035 - E-mail: nbloxsome@alfed.org.uk



• Alloy Gonvarri Industries, Union Street.



• Alloy Gonvarri Industries, Popes Lane.



• MG Metals, Romsey.

THE VOICE OF THE UK ALUMINIUM INDUSTRY – DRIVING A SUSTAINABLE FUTURE

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.

MAKE THE MOST OF YOUR MEMBERSHIP

As a member of the Aluminium Federation, you benefit from a range of services that help you develop your business, workforce and supply chain.

HERE ARE SOME OF THE MANY BENEFITS YOU GET AS PART OF YOUR MEMBERSHIP

- Advocacy and Lobbying
- Events
- Technical Support
- Market Insight
- News
- Health and Safety
- Consultancy
- Training, Skills, Education and Apprenticeships

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HOW ALFED MEMBERSHIP
CAN HELP YOUR BUSINESS

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CELEBRATING ALFED'S PAST AND LOOKING TO THE INDUSTRY'S SUSTAINABLE FUTURE



This year's ALFED business briefing and dinner involved a combined effort to make the arrangements placing the Federation's 60th anniversary and our Net Zero strategy at the heart, alongside key briefings from the Bank of England, CRU Group, Fraser of Allander Institute, IAI, and LME.

ALFED marketing and communications manager Kirsi Lintula spoke to Professor Andrew Perchard (University of Otago and Institut pour l'histoire de l'aluminium) who, with his colleagues Professor Niall Mackenzie (University of Glasgow) and Dr Duncan Connors (University of Otago), has produced ALFED's 60th anniversary history, including an exhibition mounted at the event and a booklet. If you weren't able to attend, please contact the ALFED

offices for a copy. After Andrew Perchard addressed the business briefing, Kirsi caught up with him to ask him about the key lessons emerging from the history and what implications that has for the present and future of the industry: "Well, Kirsi, we've identified a number of overriding themes to emerge from ALFED's history and that of the sector, informed by our research and explored through various key episodes and

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 15 will be available on 15th December

For more information please contact:

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m: 07768 566 437



NEWS
ALUMINIUM



events. The most important of which is cooperation. This was a point that Nadine Bloxsome picked up on in her captivating presentation today. The industry - both here in the UK and internationally - has a long history of cooperation. It has been that cooperation that has aided the industry through difficult times. Alongside that has been acute leadership at key junctures able to scan for current and future risks and opportunities and capabilities required to meet them. Closely related is an active membership willing to contribute the time and energy to use its voice to inform and support the Federation and the sector. As you might expect for someone who has spent the best part of two decades researching the history of the aluminium industry and sits

on the scientific council for a body created by the industry to research its history, the IHA, I would recommend that having a good understanding of your history is crucial to informing your acuteness to your environment and devising strategy. If we look at the situation confronting the global industry over the past few years, and indeed decade, then it has faced perennial issues around energy, market and political risks. There are also opportunities to be found in these and they underline once again the importance of cooperation. With ALFED and the industry demonstrating leadership to address the climate crisis these perennial issues are also closely interlinked with key facets of any future road map to sustainability. The industry has done

this in the past adapting technologies to respond to energy shortages and reducing emissions, as well as changing consumer attitudes, in partnerships both within and outside the industry. The industry needs to be considering sustainability both from the perspectives of the health of the planet and of the long time survival and thriving of aluminium. That means cooperating with key stakeholders: government; other industries; consumers and local communities; and universities, colleges and schools. That needs a strong voice advocating for aluminium, as ALFED does, and posing the important questions around security of supply of energy and raw materials, around trade policy, and consumer behaviours."

- Tom Jones, ALFED CEO with Professor Andrew Perchard (University of Otago and Institut pour l'histoire de l'aluminium) with his colleagues Professor Niall Mackenzie (University of Glasgow) and Dr Duncan Connors (University of Otago)



QUESTION OF SPORT BIRMINGHAM

Thursday 2nd March 2023

Drinks Reception from 6pm |

Quiz | Dinner at 7pm |

Bar until Midnight | Black Tie

Aston Villa Football Club,

Trinity Road, Birmingham, B6 6HE

The KidsOut Question of Sport is a well-established charity event not to be missed in Leeds, London, Manchester, Birmingham, Cardiff, Newcastle, Bristol and Glasgow.

With an expected attendance of more than 200 influential guests from key businesses across the region, Question of Sport is a not to be missed charity event in the West Midlands corporate calendar. You can gain significant corporate recognition at this event by adding your support through one of our packages.

KidsOut provides fun & happiness to disadvantaged children when they need it most

Last year over 20,000 children escaped domestic violence and sought sanctuary in a Women's Aid Refuge. KidsOut provide thousands of fun days, thousands of toy

boxes to the children who arrive with nothing!

KidsOut also provides workshops and counselling for the most vulnerable children to help build their self-esteem and to show that someone does care. The majority of these children have personally suffered serious abuse and the work of KidsOut can be life changing.

In addition to this, KidsOut and Rotary Clubs have taken over 30,000 disadvantaged children in the region on a magical day out.

Just imagine you are a child who has...

NEVER received a gift

NEVER had a brand new toy

NEVER walked on a beach

NEVER been to a theme park

But you have...

LIVED every day in fear of abuse ...and cried yourself to sleep each night

Why should you come along?

Held at the iconic Aston Villa, home to Aston Villa FC, you and your guests will compete as a team to be crowned champions in a stylish and engaging quiz based on the popular TV show 'A

Question of Sport'. The evening will begin with a champagne reception before sitting down to a quality three course dinner.

Throughout the evening, you will take part in the interactive quiz shown on the big screens. It features questions that will test sporting knowledge but also other topics that are sport related that everyone can enjoy. Each round includes the old favourites of Mystery Guest and What Happened Next?

As well as the quiz, there will also be a main and silent auction to win money-can't-buy prizes, entertainment and games, such as the popular Higher and Lower.

Although KidsOut is a UK-wide charity, we operate on a local basis meaning that funds are spent in the same area in which they are raised.



For more information:
<https://bit.ly/3Y9dOKK>

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INDUSTRIAL ENERGY TRANSFORMATION FUND (IETF) PHASE 2: CLOSING JANUARY 2023

The £289m Industrial Energy Transformation Fund has been supporting the permanent deployment of industrial energy efficiency and decarbonization technologies on industrial sites in England, Wales and Northern Ireland since July 2020. Your final opportunity to apply for funding from this successful programme is now open.

The Department for Business, Energy and Industrial Strategy (BEIS) is providing capital investment for industrial sites, such as manufacturing, mining, quarrying and material recycling, both within and outside the industrial clusters, to transition to a low carbon future. The £70million Autumn 2022 window is open for applications and will run until Friday 13th January 2023.

The competition will provide grant funding towards the costs of:

Feasibility and engineering studies for potential deployment projects that will deliver energy efficiency or decarbonisation benefits if implemented, enabling decision-makers to make informed investment choices

Deployment of mature energy efficiency technologies that improve industrial energy efficiency and reduce energy demand (TRL 8-9)

Deployment of deep decarbonisation technologies that reduce carbon emissions associated with the industrial process (TRL 7-9)

Read more: <https://bit.ly/3DBKR25>

INVESTMENTS IN SUSTAINABILITY: EMR'S IMPROVEMENTS TO ITS FACILITIES THROUGHOUT THE CAPITAL

Metal recycling is changing. Whether it is adapting to customers' shifting needs and expectations, or embracing the challenges of reducing its carbon emissions, EMR is committed to meeting this movement.

"Our investments in our busy London facilities provide a great example of how EMR is confronting the transformation of our industry and using it as an opportunity to improve what we do," says Steve Bareham, Director (Southern Region) at EMR.

One recent example of the investment EMR is making is the multi-million-pound relocation of the company's Canning Town facility to Silvertown.

"The relocation has allowed us to develop a purpose-built space, designed with customer experience in mind. Members of the public and sole traders will be greeted by our colleagues, have a simple journey to where they can offload material and then payment is made direct to their bank for a quick, secure, contact-free, experience," Steve adds.

EMR has also taken the opportunity to invest in the latest sustainable technology, including an electric sheer, electrified cranes and the capacity to switch to 100% renewable power as new, greener equipment becomes available.

"Everyone at EMR is focused on achieving our 2040 net-zero target as part of our sustainability strategy," Steve says. "By switching to



sustainable technology like this EMR is able to show that we're serious about this mission."

Silvertown is by no means the only example of the changes EMR is making at its London sites. A huge investment into operations at Tilbury Dock means EMR can now export and import more material via its deep-sea dock facility, ensuring it can find the most efficient path back into the circular economy.

Read more: <https://bit.ly/3FMDJp6>

DECARBONISING THE FOUNDATION IMPLICATIONS FOR WORKER SKILLS

The University of Leeds Business School is planning a project which aims to better understand some of the recruitment challenges the Foundation Industries are experiencing in order to aid preparation for a net zero transition and to ensure that worker perspectives are included in decarbonisation plans. Ursula Balderson a researcher based at the University of Leeds Business School. She is in the process of developing a project that aims to better understand some of the recruitment challenges the Foundation Industries are experiencing in order to aid preparation for a net zero transition.

Read more: <https://bit.ly/3PIYdDB>



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INTO METALS
**AND EVEN
BIGGER INTO
ALUMINIUM**



Amari Metals Engineering Group (AMEG) is a consortium of market-leading companies that specialise in the design, engineering, manufacturing and supply of precision components, fittings, forms, sections and materials. With a number of businesses that can offer a total aluminium fabrication and processing service, from die design, extrusion, stockholding, conversion fabrication and JIT delivery, we really are someone to talk to about **Aluminium**.

www.a-meg.com

POTHoles ON THE ROAD TO NET ZERO

Welcome to the new, quarterly update on all things 'sustainable'. Already, the word is driving us all a bit mad, as it continues to float its way into daily conversations on a silver-lined cloud of positivity that seems ready to burst with thunder and pouring rain at any moment. (The kind that keeps you on your toes and knows you've stepped out without an umbrella or a hood.)

Even with the word firmly in my job title, I'm keen not to use it to brush over things or as the buzzword it has become. There are serious challenges that come with creating sustainable supply chains and at the moment, the road to Net Zero is patched up with potholes that need to be carefully negotiated.

The Energy Bill Relief Scheme is top of the list to mention this month. The scheme is available to all businesses, but the small print highlights that there are 'limited' exclusions, for example businesses that use gas or electricity for the purpose of generating power they are selling back into the grid, such as power stations, pumped hydro or grid-level battery storage, so keep this in mind.

There is more information about this scheme available online and we will endeavour to keep you as up to date as possible with the changing landscape, as we head into what could be a very costly winter.

<https://www.gov.uk/guidance/energy-bill-relief-scheme-help-for-businesses-and-other-non-domestic-customers>

In other news, if you've not already heard of the Mission Possible Partnership (MPP), then now is the time to get Googling. At the end of September, MPP, which is an alliance of climate leaders focused on supercharging efforts to decarbonise some of the world's highest-emitting industries, in collaboration with the International Aluminium Institute, released an ambitious decarbonisation roadmap.

Ambitious is the word, as it details what the global aluminium industry could look like in a zero-carbon world and what is required to get there in terms of energy, infrastructure, financing, and policy. The report is available as an interactive tool that allows users to compare decarbonisation pathways for aluminium production in different regions. While this has a global focus and covers the primary sector in detail, I'd encourage you to take a look at the information surrounding how recycled aluminium plays a critical role, expanding from 33% of supply in 2020 to over 50% by 2050.

Finally, I will end on another buzzword - hydrogen. The Carbon Trust has recently announced a new clean hydrogen accelerator, which aims to help secure the UK's energy supply and support climate targets. The project is backed by BEIS, the UK Government's Department for Business, Energy and Industrial Strategy and aims to speed up the deployment of clean hydrogen, by reducing the end-to-end cost through technical innovation so that it becomes cost competitive with conventional alternatives.

https://www.carbontrust.com/news-and-events/news/clean-hydrogen-accelerator-receives-uk-government-backing?utm_source=Carbon+Trust+Newsletter&utm_campaign=26a1c570e5-Oct22-newsletter&utm_medium=email&utm_term=0_2e40152a6f-26a1c570e5-84885392

If you're interested to know more about this programme, then the Carbon Trust is calling for industries to engage and help to develop solutions. Please get in touch with any information and ALFED can help to facilitate this engagement.

Nadine Bloxsome

ALFED Membership & Sustainability Manager

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E-mail: nbloxsome@alfed.org.uk

ALUMINIUM FINISHING SYSTEMS

Junair have been designing the UK's most efficient paint and powder finishing equipment at their North Manchester facility, for close to three-decades. Specialising in the supply of equipment to our automotive, aerospace and industrial clients, as well as supplying equipment specifically for the aluminium industry, capable of meeting stringent Qualicoat standards.

We have a specialised team who are experts in the design, manufacture, and supply of:

- Paint and powder coating systems
- Dip and spray pre-treatment
- Drying and curing ovens
- Dry filter, water back and powder booths
- Overhead and floor mounted conveyor systems

Junair's aluminium finishing facilities include pre-treatment (5-7 stages), efficient dryers, specialised powder and wet paint application and recovery booths, curing ovens and conveyor systems. All are supplied with our standard energy saving features, some of which are detailed below.

Reducing the cost per part

Our aim is to reduce the cost incurred on every part that is processed through the finishing system. Starting over 30 years ago within the automotive paint repair industry, Junair's focus has always been to provide the lowest running and life cycle cost of any equipment on the market, as well as providing the fastest processing and highest quality. Ensuring this through a series of fully automatic energy saving control systems, a high level of build quality, as well as expert advice on general usage and line utilization from one of our industry specific engineers.

Our EcoPlus ethos has driven us to design and supply paint and powder coating facilities which are the most efficient systems on the market. We look at every aspect of the system to ensure even the smallest marginal gains can be captured. With FuelSaver modes, digital equipment monitoring and product tracking we can ensure the running of your finishing plant doesn't cost a penny more than it needs to. Simplified and automated controls remove the need for operator input and continuous monitoring allows us to turn down or shut off the facility when not in use.

All our finishing systems include PLC control and Variable Speed Drives for motor control as standard. While other EcoPlus additions include: sustainable electric heating, Infra-Red booster oven, heat recovery systems and true cascade operation control on the entire line, as well as electronic Gas, Electric and Water monitoring.



Variable Speed Drives

Junair finishing equipment is fitted with variable speed fan controllers as standard (Inverters), which allow the fan speeds to be set on commissioning for optimum performance and minimum energy usage, and allow automatic turn down for periods of inactivity.

LED Lighting

Fitted as standard with LED lighting for reduced energy use and extended life. Working with industry leading component manufacturers, Junair have developed a class leading LED light solution with optimised light levels at the point of painting or inspection. excellent colour rendition, with a suitably diffused light to reduce dazzle.



Heat Recovery

Junair can supply all equipment with exhaust air heat recovery. These systems are designed to achieve a minimum 65% efficiency, extracting 65% of waste heat from the exhaust air. This system provides energy saving in addition to all the other standard options.

Electric Heating

All Junair equipment can be supplied with electric heating to allow a truly 'green' use with all energy being sourced from renewable sources. The operation is identical to a standard equipment, and all regular paints, painting techniques and processes can be used.

Equipment Life Expectancy

All Junair equipment is designed using advanced 3D CAD systems to achieve the very best fit and finish, and is designed and built with high quality components and construction; Junair equipment has a reputation for being the longest lasting on the market. All elements have been optimised for operation and maintenance to ensure that they can be operated at the highest efficiency throughout the whole life, which is often ten years longer than competitor's equipment.

TECHNICAL



One Stop Shop

Not only do Junair design and manufacture in house. We also offer a single source solution to your paint facility requirements. Not only providing the capital plant equipment, but we can also provide a complete turnkey package encompassing compressed air systems and installation, gas supply pipework and roof work, as well as any builders works required. Our dedicated in house project management team use years of industry specific experience ensuring you don't have to worry about anything else.

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market.

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Paint and powder coating systems
Dip and spray pre-treatment
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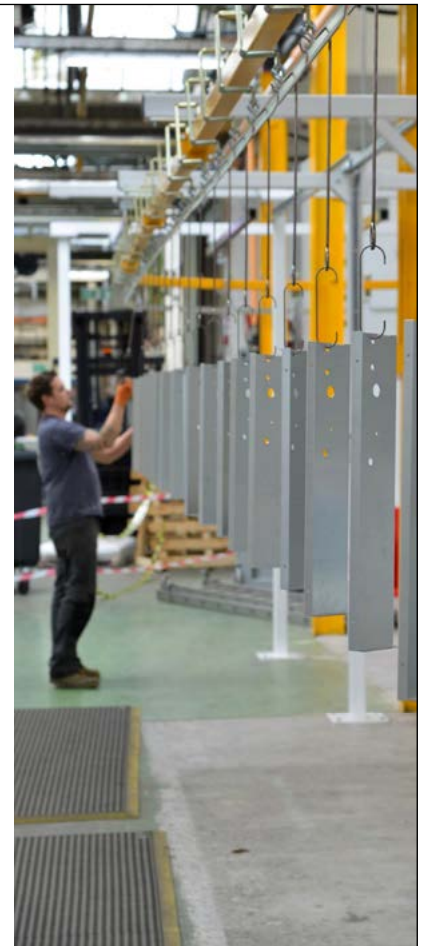
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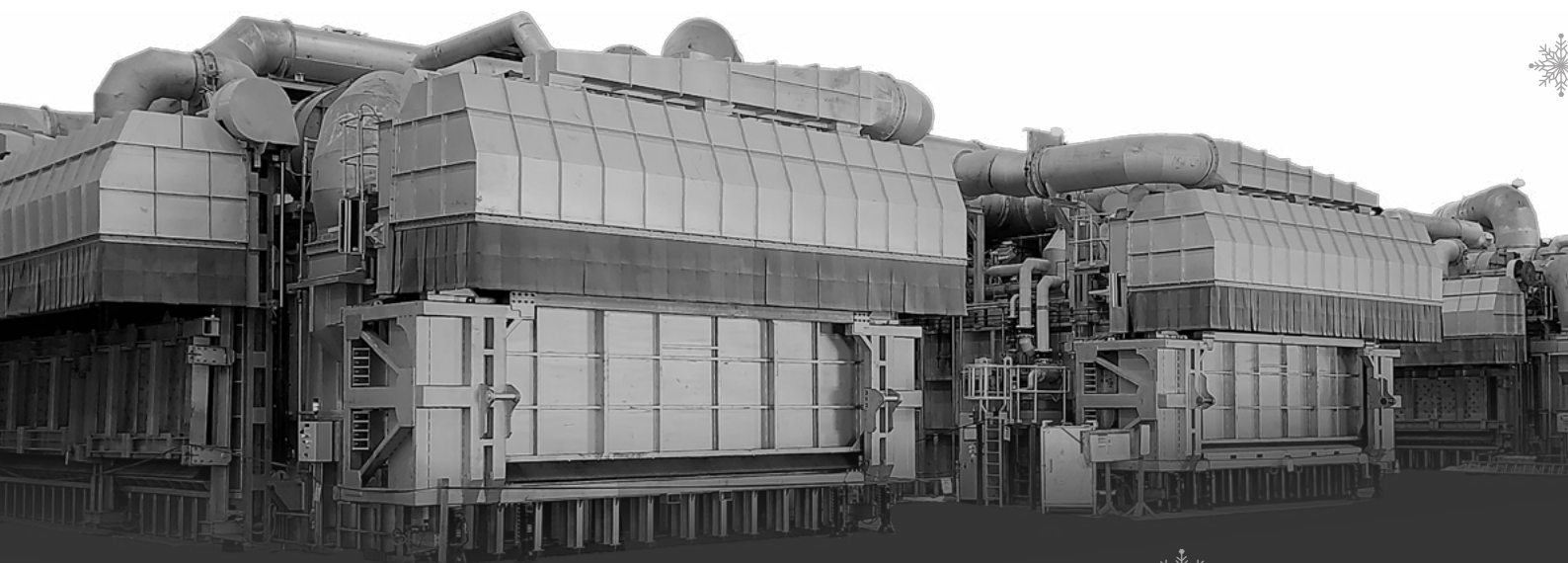
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WHY SPECIFY QUALICOAT FOR RESIDENTIAL INSTALLATIONS?

By Angus Mackie - QUALICOAT UK & Ireland Chair

Over the last decade members of the Association have seen a huge rise in QUALICOAT specifications for powder coating on a wide range of bespoke installations across the UK and Ireland. More wide ranging than BS EN 12206, the QUALICOAT Specification differs from the recently updated British Standard, requiring twice yearly, unannounced, third party accreditation visits for all its licensed members which ensures that the latest QUALICOAT specification is being followed. Any member failing an inspection will be given a short time to comply, failure to comply will result in the coating company losing its QUALICOAT licence.

A QUALICOAT specification is not just aimed at commercial projects, the specification is relevant to all architectural aluminium powder coating requirements, commercial and residential. It is crucial therefore that aluminium used in residential installations receives the same care when choosing and specifying its surface treatment. Members now report that they are coating a growing number of residential aluminium systems for home improvement, as the demand for aluminium windows and doors continues apace.

Whilst systems companies products will generally carry a QUALICOAT approved powder coating applied by a licensed coater, the Association recommends that if in doubt, all home improvement companies should seek confirmation that they are receiving a QUALICOAT powder coated product. In fact, the specification should appear in all home improvement contracts with homeowners, which it turn, will offer purchasers further peace of mind when choosing aluminium. It is important to note here that a QUALICOAT specification should be no more expensive than a BS EN 12206 powder coating specification.

Whilst supplying a standard QUALICOAT approved coating is suitable for most residential applications in the UK there are some options which we should be aware of. It is obvious that a colour reference is required, but there is also gloss levels to consider, the range reference is generally as follows:

'Matt Powders' are usually between 20% and 30% gloss level

'Semi-gloss Powders' are usually around 60 to 65% gloss level

'Gloss Powders' at least 80% but can be up to 85% gloss level

Gloss levels are easily checked using a hand held 'Gloss Level Meter', colour can be measured using a hand held 'Colour Meter'.

On more complex home improvement projects it may be necessary to colour/gloss match different products such as pressed cills, column casings and spandrel panels. A close match can be obtained by careful specification, but any QUALICOAT powder

coater should be able to take a range of unfinished profiles and pressings from various providers and powder coat the complete project in one batch, which ensures a high quality colour and gloss consistency.

Finally, one important area which has caught out many a home improvement installer, is obtaining the correct specification when powder coated products are installed close to the coast. Contrary to popular belief, a powder coating finish is microporous, so if the pretreatment is not properly applied, corrosion under the surface can occur which will lead to premature surface coating failure. A QUALICOAT Seaside Class of coating ensures that the pretreatment system is applied in a more robust way and offers a better adhesion and life expectancy in these harsh environments. A quick call to your local QUALICOAT powder coater, given the location of the installation, will offer advice and if needed offer the home improvement installer a more robust 'Seaside Class' coating specification and warranty for the homeowners and installers peace of mind.

Growing rapidly, there are currently twenty QUALICOAT licenced powder coat applicators across the UK and Ireland with a further four who will gain their applicator licences and join in 2022 after undergoing rigorous quality checks on equipment and processes. Members details are freely available on the new QUALICOAT UK & Ireland website and the Association would suggest that all home improvement companies should seek out a local applicator who can offer free advice on the correct coating specification for any residential application. Getting the coating specification correct for any project does not take long but it does ensure that as a provider of home improvement systems you are offering your customers the very best of what is achievable. Also important is the level of coating problems or possible failures you may be experiencing will drastically reduce as a result.

The worldwide QUALICOAT Specification is continually and incrementally revised in real time with regular update sheets, the specification is completely rewritten every year

• Angus Mackie - QUALICOAT UK & Ireland Chair.



end to include all updates. The Specification, its appendices and any update sheets are always freely available for download at www.qualicoat.net. For details on the availability of various colours and finishes contact any QUALICOAT UK & Ireland member for more information. For updated information about the use and specification of QUALICOAT in the UK and Ireland, please visit the UK & Ireland Association website at www.qualicoatuki.org



IMPRESSION TECHNOLOGIES AND FISCHER GROUP WITNESSING SIGNIFICANT INTEREST FROM THE AUTOMOTIVE SECTOR FOR ALUMINIUM LIGHT-WEIGHTING USING HFQ® FORMING TECHNOLOGY

Impression Technologies Ltd (ITL), the aluminium light-weighting specialist and fischer group, a global automotive supplier, recently presented their novel forming solutions for ultra-high strength aluminium structures at EuroCarBody 2022 in Bad Nauheim, Germany.

Since becoming ITL's first global accredited HFQ (Hot Form Quench) partner in December 2020, fischer has invested in a dedicated state-of-the-art high volume HFQ manufacturing line in Achern, Germany. From January 2022, fischer has manufactured 10 different complex geometry high strength aluminium HFQ pressings for a premium EV sedan and these were displayed to much interest from OEM delegates. Having successfully executed scale-up of its Achern facility, fischer is now preparing for further expansion of capacity to meet growing demand in the EV sector.

ITL, which has been developing and commercialising the core HFQ Technology since 2012, showcased the world's first example of an HFQ-formed high strength aluminium structure using 100% recycled 6082 alloy (recycled aluminium having the potential to reduce embedded carbon by over 90%). In addition, ITL presented an innovative single-piece battery enclosure lid made from high strength 6x alloy. As a relatively new innovation which could offer reduced weight, part-count and carbon intensity, HFQ captured the attention of a large number of engineers from established and emerging OEMs, with a focus on new electric vehicle and delivery van platforms.

A partnership offering new sustainable light-weighting solutions

The fischer-ITL partnership offers a unique combination of unmatched aluminium hot forming (HFQ) knowhow of ITL and world-class manufacturing engineering and production capabilities of the global fischer group.

ITL has now characterised 18 different high strength aluminium supplier grades (including 100% recycled, F-temper, 2x, 6x and 7x series alloys) to a common standard for high fidelity simulation and hot forming using the HFQ process. Moreover, it has developed even more advanced generations of HFQ for very deep drawn structures such as door inner and battery enclosures. fischer group, having successfully completed the first phase of its HFQ manufacturing scale-up has identified a range of process opportunities to meet growing demand.

fischer group and ITL are now working on the next stage of their partnership to respond to the significant interest in HFQ Technology with a focus on three areas: widening the aluminium alloy and supplier choice to OEMs (including recycled grades);

co-developing novel solutions for EV enclosures; and applying ITL's new simulation and alloy behaviour know-how refine and optimise the HFQ process for future applications.

Jonathan Watkins, CEO of Impression Technologies said of the relationship: "Impression Technologies and fischer group have been working closely since 2019 and are building up a range of applications using the HFQ Technology, with a strong focus on advanced electric vehicle structures. It is a perfect combination of capabilities and cultures. Working together, we are attracting increasing interest from OEMs in Europe and North America."

Hans Peter Fischer, Managing Director of fischer group said about the strategic relationship, "I see significant potential for HFQ structures in the global automotive sector. The fischer group will continue to invest in its capabilities across several markets to match the interest we are seeing and work closely with ITL to take the HFQ technology to its full potential."

Further details on ITL and its HFQ Technology can be found at www.impression-technologies.com; and for fischer group at <https://www.fischer-group.com/en/>

HFQ® (Hot Form Quench) Technology, developed out of research in the early 2000s in the University of Birmingham and Imperial College London, and commercialised by ITL, is a new genre of fast forming for ultra-high strength aluminium sheet alloys.

The process is divided into three main process steps: solutionising of the shaped aluminum sheet blank at approx. 450°C to 550°C, followed by rapid forming and simultaneous quenching of the component in the forming tool, followed by the artificial aging at approximately to achieve the final mechanical properties, or as required to suit down-stream joining and processing steps.

HFQ® meets the demand for complex, highly integrated geometries with large drawing depths, and tight radii in a single forming operation. At the same time, the highest possible strengths are achieved: for alloys of the 6000 series, strengths of $R_m > 390$ MPa, and for 7000 alloys even $R_m > 560$ MPa are feasible.



WHERE TO BEGIN WITH ROBOTS: DE-MYSTIFYING THE PATH TO AUTOMATION

For many manufacturers today, the question isn't *if* they should consider implementing robots, but rather *how soon* to do so, and *where exactly* to start.

It's a common sentiment to think big when considering a robot solution. In the past, the high barrier for entry for any automated solution potentially meant a total transformation of your facility. Not so in the modern era. While there are of course still massive automation projects occurring on the high end of the complexity spectrum, there are a rapidly growing number of small-scale automation solutions available to more industries than ever before.

When deciding which processes to automate, it is typically a good idea to start small. This means avoiding the inclination to address every need in your production at once, but rather identifying simple processes that are ready to be automated with well-tested and reliable technology.

The small to mid-sized manufacturers we've seen enjoy the most success getting started with automation are those who have targeted "low-hanging fruit." Processes common across a multitude of industries which now take advantage of mature, affordable, and efficient automation technology.

Identify your "low-hanging fruit"

Infeed and End-of-Line operations are a very common focus for robot implementation in almost every industry, as are processes that are high volume and low variation. Identifying such areas within your facility is the proven, battle-tested approach to successfully deploying automation.

Within the aluminium industry specifically, examples of processes commonly performed by robots are:

- Extrusion
- Welding
- Cutting
- Material Handling
- Packaging
- Palletizing

What to consider when looking towards automating

Impact on human labour

Most companies have found that robots don't fully replace human labourers. Instead, automating certain areas of your process enables these employees to be more productive in other areas. The ability to upskill manual labourers into jobs that are both more satisfying and important is a commonly cited benefit. In addition, many jobs tend to carry dangers for workers like dust, fumes, or cutting implements. By using robots to handle these



hazardous tasks, companies can keep the workplace safer for their employees, as well as reduce the need for personal protective equipment.

Cost vs. Benefit

Implementing robotics on any scale can have a high initial cost. The return on investment must be carefully considered before launching an investment in robotic automation. Many processes are repetitive and are therefore good candidates for robots to perform. To be cost-effective, perhaps one robot will need to perform multiple tasks. Investing in a multi-purpose robot may yield a sufficient volume to justify the investment.

Get your foot in the door

Having successfully completed a low-risk automation project will give your organization a positive experience to start off with. Many companies have thrown money out the window by being overambitious at first – and future robot initiatives have been halted too as a result. Of course, starting small does not mean automating with training wheels on. Smaller projects can yield significant results and can often be seen as gradual steps in a greater, long-term plan: One should start small but think big.

Interested in learning more about how manufacturers are getting started with automation and robotics in the Aluminum industry? Sign up for our upcoming free webinar, where we will be expanding on the possibilities and answering any questions you may have.

Webinar 7th of February 2023 10 -10.30 am (GMT)

Register <https://bit.ly/3FFpRIF>

How robots improve quality in aluminium manufacturing

Aluminium manufacturers are increasingly relying on robots and automation to make up for labour shortages, improve quality, and reduce scrap and waste in the production. But where can the biggest gains be made? In this webinar from HowToRobot.com, an independent advisor will reveal the top 5 most obvious automation opportunities that aluminium manufacturers are pursuing right now, their average cost and return on investment, and a (free) method for quickly identifying relevant automation suppliers and solutions.

HOW SENSOR-BASED SORTING TECHNOLOGY IS DRIVING ADVANCES IN E-SCRAP RECYCLING

Terence Keyworth, Segment Manager for Metal Recycling at TOMRA Recycling Sorting looks at how the latest advances in sensor-based sorting are providing new opportunities for E-scrap recyclers.

According to the UN's Global E-scrap Monitor 2020¹, global E-scrap will reach 74 million metric tons (Mt) by 2030, making it the fastest growing waste stream in the world. E-scrap typically contains a complex mix of materials, some of which are hazardous and must therefore be managed carefully. Furthermore, E-scrap often contains a significant amount of valuable and scarce raw materials, such as stainless steel, aluminum, gold, silver, copper, brass, indium and platinum.



- E-scrap often contains a significant amount of valuable and scarce raw materials

Europe is the third-largest generator of E-scrap behind China and North and South America and has the highest collection and recycling rates at 42.5%². There are two directives governing the management of E-scrap in the EU:

- WEEE (Waste from Electrical and Electronic Equipment) Directive
- RoHS (Restriction of Hazardous Substances) Directive.

Pre-shredding prior to sensor-based sorting

The overall goal of E-scrap processors is to cost-effectively recover valuable secondary raw materials which are as pure as possible, and which would otherwise be sent to landfill or poorly processed.

E-scrap treatment can vary hugely depending on the material type and the technology used. Some facilities use large-scale shredding technologies while others manually dismantle the material or use automation. Some use a combination of both.

Shredding E-scrap prior to sorting with any sensor-based sorting technology is essential. Using pre-shredding, hammer mills or vertical shredders, valuable components such as PCBs, cables and valuable metals can be recovered, and batteries, capacitors and other harmful materials can be safely removed.



- E-scrap is the fastest growing waste stream in the world

Using flexible sensor-based sorting technology to target different materials

A large-scale E-scrap recycling plant typically includes a first step of pre-shredding and the manual removal of hazardous material such as batteries and easy-to-pick valuables like large PCBs. A second shredding step is normally used to downsize the material to make it suitable for further sorting. A magnet removes the ferrous fraction and then the material is screened to ensure more efficient sensor-based sorting later in the process. Once pre-shredding has taken place, a number of flexible sensor-based sorting solutions can be used to increase the product yield, generate material fractions of significantly increased purity and detect hazardous substances.

- **Targeting aluminum** – Typically, an eddy current separator is used to remove the non-ferrous metals (a mix of aluminum, copper, brass and PCBs). Once these are removed, an X-TRACT™ unit can be introduced to achieve extremely accurate separation of high purity aluminum from heavy metals. X-TRACT™ is a software-based solution which uses X-ray technology to detect materials based on their density, guaranteeing premium remelt quality recycled aluminum by ejecting the heavy metal contaminants such as magnesium.



• TOMRA's X-TRACT™

- **Targeting valuable heavy non-ferrous metals** – Once the X-TRACT™ has separated the aluminum from heavy metals, the remaining mix of heavy non-ferrous metals can then be further sorted using a COMBISENSE™ unit which sorts metals such as copper, brass, grey metals and PCBs by colour and electromagnetic properties. By passing the material through a series of further sorting steps using the COMBISENSE™ unit the purity of the different target heavy non-ferrous metals end products, such as PCBs and copper, can be significantly increased. The metal content, colour, shape and size of each passing object is identified, and the targeted fractions recovered.
- **Targeting metals from non-metals** – After the infeed material has passed through an eddy current separator, the dropped material consists of plastics and other non-metals, but also includes metals that are not removed by the eddy current separator, such as stainless steel, copper wires, compounds of plastic and metals, and some PCB parts. At this stage, our FINDER™ unit can be used to recover all metals from the non-metals. This minimises the loss of valuables into the plastics and ensures the quality of the plastic end products at a later stage. The FINDER unit is extremely flexible and uses electromagnetic fields to distinguish between stainless steel and copper wire and produce a clean non-metal fraction.
- **Targeting valuable plastics** – The sorting and recovery of plastics from E-scrap will depend on which fractions are required and the volumes to be processed. Different combinations of sensors can be used to identify and separate different plastics, transforming the material into reusable granules. E-scrap contains hazardous substances or persistent organic pollutants (POPs), such as brominated flame retardants, which must not be reused or recycled. Our X-TRACT™ technology can remove these materials and our AUTOSORT™ NIR technology can remove the remaining visible polymers in the <1000ppm brominated content. The non-visible polymers can then be dried and sorted by polymer type using MIR spectroscopy into individual polymer groups for re-sale.

Latest developments in plant design

In recent years, we have worked with customers to introduce some new and innovative alternative applications of our technology. We recently installed an AUTOSORT™ unit which uses a visual spectrometer sensor to remove visible copper, such as wire

bundles attached to iron or small engines. When incorporated after magnetic separation, this solution makes the ferrous fraction much cleaner and far more likely to pass visual inspections at the steel mill.

Instead of using an eddy current separator first directly after the magnet, some of our customers have used our FINDER™ unit to recover all the metals, including the non-ferrous metals such as aluminum and copper. This is achieved using a Laser Object Detection (LOD) sensor within the FINDER™ unit. The bulk of the material – the plastics – is therefore removed upfront which means there is less material to go through the later sorting steps. Consequently, very few metals are lost, it is much easier to upgrade the metals and less footprint is required for equipment as only smaller sorting units are needed.



• TOMRA's FINDER™ unit

Finally, another new development implemented by some customers is sorting out PCBs before they enter the eddy current separator using either our COMBISENSE™ unit or our AUTOSORT™ unit. Recovering the PCBs in just one step at this stage eliminates the need to sort them from both the non-ferrous metals and the stainless steel and copper fraction. This potentially saves a sorting step and again makes the later sorting steps easier and more efficient.

Greater separation of E-scrap is a means for processors to gain a more robust trading position in the global marketplace. As sensor-based sorting solutions can be incorporated at different stages in the process, they are very flexible and can be used to target different valuable monofractions. Today, many of our customers are using our technology to target copper and other precious metals due to their high market value.

References:

1. <https://www.itu.int/en/ITU-D/Environment/Pages/Spotlight/Global-Ewaste-Monitor-2020.aspx>
2. https://ec.europa.eu/eurostat/databrowser/view/T2020_RT130/bookmark/table?lang=en&bookmarkId=a69be825-957e-473c-a81f-f02866dc9141

For further information about TOMRA, visit www.tomra.com



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NEW CARBON FOOTPRINT CALCULATOR ADDS UP FOR PROFESSIONAL POLISHING SERVICES

A new carbon footprint calculator for metal polishing has been created thanks to an exciting tie-up between industry and academia.

Professional Polishing Services (PPS), which has created three new jobs in the last twelve months, has tapped into funding and advice from the University of Birmingham's ATETA programme to develop a digital process that will help it identify thousands of pounds of savings on energy costs.

The project has involved mapping out the manufacturing flow and installing high-end data logging sensors in key places to monitor real-time power consumption of industrial equipment. Several variables, including type of material and speed of job, are factored into the equation to provide robust calculations that work out PPS' carbon footprint and identify where savings can be made.

The West Bromwich-based company is not looking to keep this IP to itself, instead it is planning to roll-out the calculator to the rest of the finishing sector in a bid to help industry move towards Net-Zero.

Kirsty Davies-Chinnock, Managing Director of Professional Polishing Services, commented:

"Our bespoke stainless steel and non-ferrous polishing services are energy intensive, so it made perfect sense for us to look at how we could monitor costs – especially with prices going through the roof.

"As a SME, it's sometimes difficult to make the time or spare the money for non-core activities. That's why tapping into the ATETA programme and all the academic expertise that came with it was a no-brainer and has resulted in such impressive progress."

She continued: "We now have a carbon calculator that can instantly work out the footprint of each of the jobs we put on our lines, and this is fantastic information to have. It gives our production team the opportunity to look at how we save energy, making us more competitive in the process.

"The next step will be to roll this out to the rest of our sector and we're already talking to the University and our competitors to see exactly how we do this."

Professional Polishing Services works with a client base that spans the world, with its efforts seen as far afield as Hong Kong and Australia.

The company's reputation for quality - all processes are governed by ISO 9001:2015 - and its commitment to fast lead times has seen it grow sales by £500,000 since Covid-19, taking it to £2m by the financial year-end.

Its strategy focuses on combining investment in the best equipment and the best people with a desire to tap into the knowledge of local Universities, already taking on two interns from WMG to improve manufacturing efficiencies and process flow.

"Although there are many companies conducting carbon accounting projects, the service provided is usually high-level information and delivers an understanding of what the firm's legal requirements are...the ATETA project is much more than that," added Sureena Sohal, Project Manager at the University of Birmingham.



"The carbon footprint calculator is for specific industries/ processes and takes a much deeper dive into the data and, importantly, how manufacturers can offset some of the findings. It's a very powerful weapon in the fight against emissions."

Kirsty concluded: "It has been a very strong twelve months for PPS and we're really benefitting from the investment in the additional polishing line. If we can manage our energy costs going forward, whilst moving towards Net Zero, then we'll be in a good position to attract new opportunities."

For further information, please visit www.professionalpolishing.co.uk

About ATETA

ATETA is an SME engagement programme designed to provide support to help businesses identify opportunities for clean energy innovation.

Funded by the European Regional Development Fund (ERDF) this programme led by the Birmingham Energy Institute (<https://www.birmingham.ac.uk/research/energy/index.aspx>) has already helped 260 businesses across the Black Country, Coventry & Warwickshire, Greater Birmingham & Solihull and Worcestershire.

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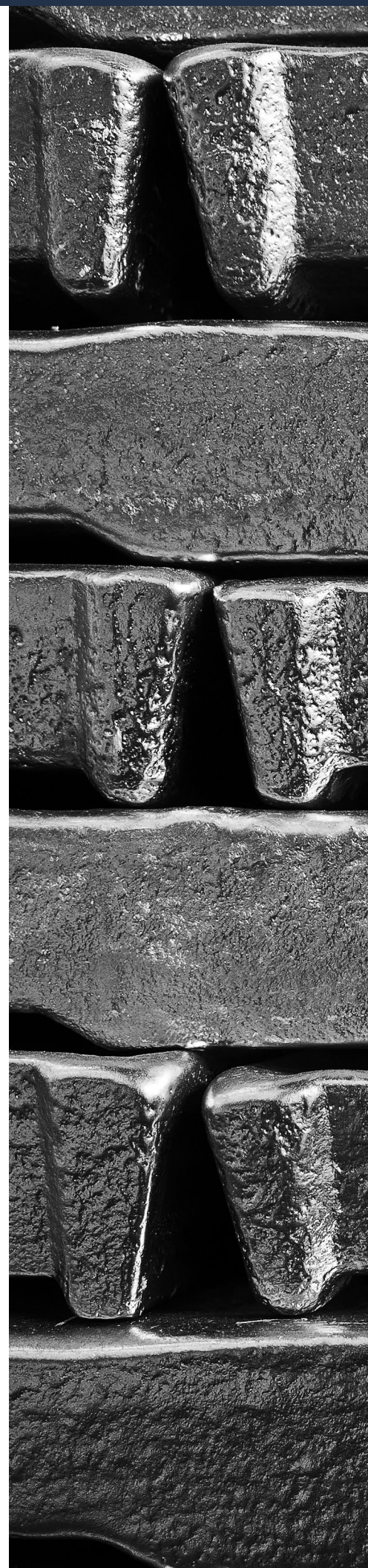
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BCAST, BRUNEL UNIVERSITY LONDON

Middlesex 01895 274 000
<https://www.brunel.ac.uk/research/Centres/>

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<https://www.bsif.co.uk/>

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<https://burchillgc.com/>

C

COUNCIL FOR ALUMINIUM IN BUILDING

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M

MAKE UK - THE MANUFACTURERS' ORGANISATION

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<https://www.makeuk.org/>

S

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Wales 01792 606 770
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T

THE SOCIETY OF MOTOR MANUFACTURERS & TRADERS (SMMT)

Greater London 0207 235 7000
<https://www.smmt.co.uk/>

THE UNIVERSITY OF SHEFFIELD

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TWI - THE WELDING INSTITUTE

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<https://www.twi-global.com/>

U

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<https://stfc.ukri.org/>

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West Midlands 02476 523 523
<https://warwick.ac.uk/>

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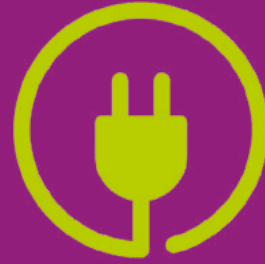


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