Press Pack 2020

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In the Spotlight

Products

Fastenings

TR FASTENINGS IS RECOGNISED THROUGHOUT THE INDUSTRY FOR WORLD CLASS PRODUCTS & SERVICES

WE MANUFACTURE, STOCK & DISTRIBUTE A VAST RANGE OF INDUSTRIAL FASTENERS & COMPONENTS

Community

Awards

Exhibitions

TR Press Release

TR Fastenings Calendar Competition Results 2020

February 2020

Congratulations to Samantha Parker from Fife Fabrications who has won our annual calendar competition!

Well done Samantha, we hope you enjoy your new Ultimate Ears Boom 2 Bluetooth Speaker.

Check out the answers above to see if you managed to find where Terry Torque and Ruby Rivet were hiding too, we would like to thank everyone who took part in this years competition!












TR Press Release

TR Fastenings provides bespoke fastening solution to leading Tier 1 automotive company

February 2020

Faltec Europe employs TR Fastenings to deliver competitive fastener supply and tooling solution

About Faltec Europe

Faltec Europe Ltd, part of the global Faltec Group, is a world-class manufacturing company and an accredited Tier 1 supplier to the automotive sector. Faltec Europe manufacture many of the interior and exterior vehicle trim products you see every day on the most popular cars on UK roads.

Faltec's European division produces over 300 car products from front bumpers to radiator grills, roof mouldings, door mouldings, door sashes, roof finishers, weather strips and lots more.

Faltec's business model is based on being robust, flexible and adaptable to meet customers' requirements within a fast-changing market and global economy. This case study is a true demonstration of that ethos.

Industry landscape

The automotive industry is a vital part of the UK economy. The industry has an £82 billion turnover (plus £20.2 billion value added). More than 30 vehicle manufacturers in the UK rely on a complex network of suppliers - a single car has around 30,000 parts. In the UK there are also around 2,600 component manufacturers supplying parts directly to OEMs.

The automotive industry has a traditional tiered supply chain (Tiers 1, 2 and 3, with Tier 1 feeding directly into OEMs), but some lower tiered component manufacturers, such as TR Fastenings (TRF), are challenging the existing market structure, taking a much larger role in innovation and Tier 1 production-line support.

Project background

Faltec Europe required a bespoke fastening for a new major programme it had recently secured with a key global OEM. The trim product to be developed was an injection moulded exterior trim part for a new vehicle due for release in November 2019.

A late design change to improve the fit of the part to the vehicle required the attachment of a strengthening support via a Peel type rivet. Peel rivets are a type of blind rivet designed to offer improved support in brittle, soft or ductile materials, applicable to the vehicle trim products in this project.

TR Press Release

TR Fastenings provides bespoke fastening solution to leading Tier 1 automotive company (Cont...)

February 2020

Fired using bespoke tooling, the head of the Peel rivets explode and become mushroom-shaped as they enter the moulding. This creates a large blindside bearing surface, significantly reducing the risk of the rivet sinking into or breaking the moulding.

TR Fastenings (TR) and Faltec are both active within the North East Automotive Alliance (NEAA) network. Following a successful pitch, TR Fastenings was appointed By Faltec as the company's provider.

Approach and solution

As a global specialist in the design, engineering, manufacture and distribution of high quality industrial and Cat C fastenings, TR was able to identify the original equipment source and submit a competitive supply solution. TR is renowned for working with clients from design table to production line to achieve innovative, effective and efficient solutions. The TR product and tooling for this project offered a robust solution and would guarantee efficient production - this secured the initial business.

Not only could TR provide the specific fastener solution, but in this instance, it was also able to supply bespoke tooling compatible for the fastener. The tooling required a bespoke rivet gun that would not only automatically fire the rivets into the moulding to be joined, but also have capability to apply rivets in a fast production environment.

Project challenges

Timescales were challenging for both parties but with close co-operation qualified parts were supplied along with tooling for development and ongoing production, both being delivered on time. Not only did TRF have to supply production intent rivets in a short timescale but also the gun was ordered late due to last-minute design changes, requiring 24 hour delivery.

The late design change by the OEM required special rapid response by TR and Faltec. TR was able to take the lead on supplying fast-production intent rivets and tooling in a very short period.

Greg Lynch, Automotive Business Development Manager at TR said, *"Perhaps the biggest challenge came with technical advice and training. TR had to ensure correct and safe operation of the rivet gun. Due to its bespoke nature, Faltec staff responsible for the operation had no experience in the use of this particular tool and engineering."*

Greg further explained that when Faltec first tried the application they thought it had failed. However, once it had been confirmed that the rivet was in fact the correct specification, it was understood that perhaps further assistance would be required in how to use the tool and rivets in a fast production environment.

TR Press Release

TR Fastenings provides bespoke fastening solution to leading Tier 1 automotive company (Cont...)

February 2020

TR's Quality Manager, Dave Fearon, visited Faltec at the production facility to help lay out the process and demonstrate how to use the Rivet tool in a safe manner. It was acknowledged that without correct use, the application could have been dangerous to operators. As full service was of the utmost importance to TR their engineers visited Faltec several times, initially to explain how the Rivet gun would operate, but then to train staff in appropriate use and safety.

TR provided ongoing support throughout the initial trial phase and was asked to assist in technical evaluation ready for onsite production at Faltec. This project is indicative of TR's service which goes far beyond product supply and applications.

Project outcomes and advantages

Following success with this project, TR has been nominated to supply serial production, cementing its ongoing relationship with Faltec.

Outcomes and advantages of the project included:

- Parts and tooling were delivered on specification and on time given challenging timescales
- Due to TR's extensive capability, it was able to offer Faltec additional product tooling over and above the initial bespoke fastening RFQ
- TR provided ongoing project support ensuring onsite production timescales were met
- The successful project has resulted in ongoing work for TR for the supply of serial production for a further three years

"*TR Fastenings want to be the first point of contact for Faltec's ongoing fastener requirements and business development, so providing a first-class service and gaining trust from Faltec Europe was of paramount importance to us. Being an active member of the NEAA has enabled good business networking opportunities with new and existing customers.*" **Greg Lynch, Automotive Business Development Manager**	*"Following late design changes on a project, Faltec Europe was faced with a challenging timeline to find a solution. We contacted TR for their input and support, which proved invaluable. TR quickly offered a product that met the design requirements and they also suggested solutions on the assembly equipment that could be used, speeding up our process development. The final result was a change delivered on time and on budget."* **Wayne Turnbull, Senior Manager**

TR Press Release

TR Fastenings proud to celebrate International Women's Day 2020

March 2020

International Women's Day

IWD 2020 is being celebrated across the world today, March 8th 2020 and TR is marking the occasion by sharing latest information on our female apprentices across our UK locations.

Our apprentices make a huge impact on TR, at all levels of the business. We are immensely proud of their achievements and commitment to the company.

We currently have four female apprentices:

- Shani Coker – Administration Apprentice, Uckfield
- Lydia Ball - HR Apprentice, Uckfield
- Emily Cowens – Business Apprentice, North East
- Emily Haigh – Warehouse Apprentice, North East

We are also proud to have five out of seven of our UK locations headed up by females!

Q&A with our Apprentices

Shani Coker, Uckfield

"The best part of my role is the variety of work I do here at TR, every day brings something different. I am looking forward to progressing within the company and to developing my skills further by learning new things. This is an exciting opportunity for me."

Click here to read more about Shani and her Apprenticeship at TR.

Emily Cowens, North East

"I love working at TR, I would say my greatest achievement is that I am the main point of contact for our kitting companies, which I am really proud of, as I have full control of checking what is going out to them on a weekly basis and what we are receiving back. Another achievement is that I have never had a sickness day in the full year and 7 months that I have worked here."

Click here to read more about Emily and her Apprenticeship at TR.

Interested in finding out more about an Apprenticeship with TR? Visit our Careers pages.

TR Press Release

Chris Black of TR Fastenings invited to participate in new NEAA trade group

May 2020

Chris Black, Director of Automotive Business Development at TR Fastenings has been invited to be the industrial lead for the new Trade Working Group set up by the North East Automotive Alliance (NEAA), the largest and fastest growing organisation of its kind in Europe.

This recently launched trade group is a key part of the NEAA's 5 year strategy to better understand and support the trade activity of its members. With over 35 years of industry experience and an active alliance member, Chris Black is well placed to share latest insights, best practices and successes achieved through his global leadership position with international specialist TR Fastenings.

Founded in 2015, the NEAA is an industry-led automotive cluster which aims to be at the forefront of the Government's strategy to progress automotive technologies within the UK. The north east produces 30% of all UK passenger vehicles, which includes 20% of all electric vehicles across Europe and 10% of all UK non-highway vehicles per year. The region has firmly established itself as the leading UK location for battery manufacturing and is now the world leader in power electronics, motors and drives. It is home to a globally competitive supply chain which consists of 31 tier 1 suppliers and a host of specialist SMEs, R&D centres and a strong support network.

Chris Black feels passionately about his involvement with the NEAA; *"Since joining the alliance five years ago, I've been actively involved attending meetings, events and providing guidance, whilst also encouraging collaboration between members. The alliance has grown significantly during this time which reflects the buoyancy in this sector and a need for a trade support mechanism for members.*

"TR has a vast global footprint which continues to expand and by sharing our experiences with fellow members, we can help to find solutions to the challenges of growing overseas such as investment, recruitment and securing new business.

"This trade group brings together ambitious companies looking to scale up, within the UK and abroad, and I am truly delighted to be working with Rohan Kohli at the NEAA to support this new initiative."

The NEAA Trade Group meetings are held quarterly with the first meeting hosted in November 2019 at the Port of Tyne in South Shields.

TR Press Release

TR Formac expands presence in Thailand and joins Electric Vehicle Association

June 2020

TR Formac, part of Trifast plc with corporate world headquarters in East Sussex, U.K. has expanded its global presence by moving into larger premises in Prawet, Bangkok, in response to strong growth across Asia and winning new business from global OEMs. The new facility provides around 3000 sq. ft. of space enabling the company to trade more efficiently and to help further strengthen its position in the growing EV market.

Operations in Thailand are headed up by Country Manager David Ng, a knowledgeable and well connected individual who has witnessed the fast development of the automotive sector across the country. Chris Black, Global Director of Automotive Business Development, will be supporting David and the TR Formac team to increase their market share of the Automotive EV sector, sharing his experience and knowledge with the Thailand team.

David commented; *"There are huge growth opportunities in Thailand with key focuses on technology and innovation of electric vehicles. With this in mind, and to collaborate with other companies, we decided to join the Electric Vehicle Association of Thailand (EVAT) which the Thai government was instrumental in launching.*

"There are three phases involving intensive R&D to enable the production of 1.2 million units by 2036 and 690 EV smart charging stations. All types of electrified vehicles are on the agenda; battery, hybrid, plug-in and fuel cell. Moving into bigger premises facilitates our continued growth; it's a key part of our strategic business development initiative to move us forwards."

The Electric Vehicle Association of Thailand (EVAT) was set up in 2015 by individuals from the private and public sectors to promote and support industrial manufacturing, research and development, and EV usage in Thailand. There has been strong recognition within the country, specifically at government level, to strengthen knowledge and global competitiveness of Thailand as an EV manufacturer. Supported by the Ministry of Energy and the Energy Regulatory Commission, the EVAT enables members to exchange information and initiate changes towards a low-carbon transport community.

TR's manufacturing capacity in Malaysia, Singapore and Taiwan totals over 359,000 sq. ft. of factory space producing 525 million components per month. Thailand is the 13th largest automotive parts exporter and the sixth largest commercial vehicle manufacturer in the world with aims to become one of the top performers in the global automotive market.1

TR Formac is recognised throughout the industry for world-class products and services, manufacturing and distributing a huge range of industrial fasteners and associated components. PSEP (Power Steel & Electro-Plating) in Malaysia was acquired in 2011 and the Thailand office opened in 2013.

Source: 1 ASEAN (Association of Southeast Asian Nations) briefing online report 2018

TR Press Release
TR Fastenings – keeping it local

June 2020

For over 45 years TR Fastenings' UK manufacturing plant in East Sussex has produced millions of products, including its own highly regarded Hank® brand.

The current purpose built factory which opened in 1992 houses 50 single and multi-spindle machines and produces 3 million parts each month. The multi-spindle machines can form, turn, drill, knurl and part off a steel component in as little as 1.2 seconds.

In an era where manufacturing is usually focused in the Far East, TR Fastenings is proud to have retained their manufacturing unit in the UK to maintain a competitive advantage through greater flexibility with pricing, volumes and short lead times. Additionally, sourcing raw materials locally allows faster production times to meet customer demands.

As the only producer of the genuine Hank® Rivet Bush, the site also manufactures the K-Series® nuts as well as bespoke items in aluminium, brass, stainless and steel. The diverse range of machines enables TR to produce products as small as M2 and as large as M36, which are used across a host of industry sectors.

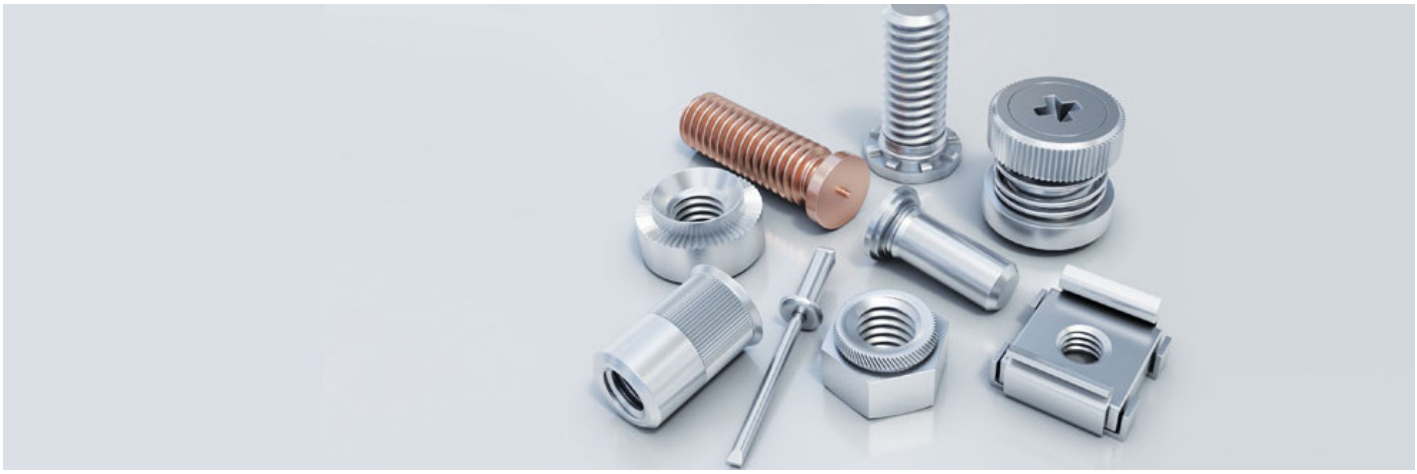
Looking to the future, the TR Fastenings UK manufacturing plant will continue to make the product it is famous for – the Hank® Rivet Bush. As well as the design and manufacture of new products, such as the recently introduced K-Series® Thin Nuts, TR will continue to work with customers with any application requirements and manufacturing bespoke parts, when required.

Simon Lockeyear, Production Manager, who has worked for TR Fastenings for the last 37 years comments: *'The company is proud of its factory, the quality of the products we produce and the loyal and skilled workforce. In a day of dominant foreign imports, it is a breath of fresh air to have a UK producer holding its own in a very competitive market place.'*

TR Press Release

TR responds to unprecedented global sheet metal fastener demand

July 2020



The outbreak of the Covid-19 pandemic created a surge in global demand for medical equipment, with the subsequent knock-on effect of a huge demand for sheet metal fasteners, specifically for those companies producing essential equipment, including ventilators. International specialist TR Fastenings focused on being as responsive as possible to meet this demand and is now further investing in its sheet metal range to accelerate growth of this product portfolio.

TR has been leading the sheet metal fastening industry for over 45 years, providing products to more than 5,000 global customers from 32 business locations in 18 countries. TR's ability to move with the times and adopting a fast track approach has firmly positioned the company as a market leader; an internationally respected manufacturer who is flexible enough to continually adapt its range and stay ahead of the competition.

This latest investment sees expansion of its own highly regarded Hank® Self Clinch Fasteners and the launch of a new range of K-Series® Thin Nuts. TR's own facility in the UK can manufacture as small as M2 and as large as M36 which are used across a wide range of industry sectors.

TR has a robust business model for large OEM's and SME's and competitive advantage is achieved through flexible pricing, volumes and short lead times with the capability to source raw materials locally, allowing faster production times to meet demand.

There are many application challenges within the sheet metal industries and TR can offer fastener testing capabilities across mechanical, dimensional, installation, and plating and finishes. TR supplies sheet metal products for pressing, riveting or welding during manufacturing or assembly processes.

TR's website leads the way in showcasing sheet metal fastening solutions

TR's industry leading website now further enriches the customer journey by showcasing the very latest information on sheet metal fasteners with technical, explanatory animations and visualisation tools showing how products can be installed.

The videos and enhanced online resources provide key insights including detailed product specifications such as dimensions, materials and performance guides, FAQs, spotlight pieces and customer feedback supported by global sales and marketing activity.

Steve Wallis, Sales Office Manager at TR Fastenings, said: *"The recent pace of change across the industry has been unprecedented and TR has been able to utilise years of experience to adapt to this. Customers are looking for higher quality and smarter application-based sheet metal fasteners, and selecting and installing the right fastener, within tight timeframes, is a challenge.*

TR Press Release

TR responds to unprecedented global sheet metal fastener demand (Cont...)

July 2020

"This is where TR's global teams can add real value, from our knowledgeable customer services assisting with product suitability through to our expert quality and application engineers providing guidance from early design through to specification and manufacturing."

TR Press Release

Getting a grip on fasteners and their coatings within the transport sector

July 2020

A focus on automotive and the EV market

By Sven Brehler, Engineering Project Manager at TR Fastenings

As a full service provider with a worldwide reach from the USA to Asia and Europe to the UK, TR Fastenings works closely with automotive Tier 1 companies to respond to their needs and global developments. Supplying 10,000 different fasteners annually into the automotive sector, TR is playing a central role in shaping the future of the fastener industry within this changing space.

The global electric-vehicle (EV) industry is expanding rapidly with 60% year on year increase and sales growing to 2.1 million units in 2018[1]. As a result, advanced technology is now a top priority for competing OEM's and the role of fasteners is significant.

Transport technology companies around the world are under pressure to innovate as a result of rising cost pressures, and trends such as lightweighting, autonomous driving and electro mobility growing apace.

Suppliers into Tier 1, such as TR Fastenings are increasingly required to come up with technical innovations for fasteners that work harder and 'smarter' that can be produced quickly and cost-effectively.

The key fastening applications within automotive include sub tier manufacturers; seating; power trains; thermal management; HVAC; high-end performance cars and the EV market - the latter being the fastest growing sector for TR Fastenings to which they supply automotive grade fasteners to OEM specification. It's an evolving application that is leading the fastener industry to greater sophistication.

Lightweighting in fastener technology

Achieving fastener weight reduction whilst maintaining high torque demands have become an important requirement in automotive applications. Industrial drive systems such as the Mortorq® screw require up to 25% less material in the head yet still provide super high strength internal drive – an example of an innovative system providing the lowest head possible without compromising on fastener assembly performance.

One of the heaviest components in an EV is the electric battery, which runs the risk of negating the idea of carbon emission reductions if the vehicle's weight increases energy consumption. As a result, fastener companies such as TR and their supply chains are constantly looking to innovate and are inspired by other transport industries such as aerospace.

Fastenings and their coatings within the EV sector

Batteries, motors, transmissions and all their associated electronics are the leading technology areas of EV R&D and the fastenings and their coatings play an essential role.

Innovative engineering techniques are now being applied throughout the design and manufacturing process in order to meet customers fast changing needs.

TR Press Release

Getting a grip on fasteners and their coatings within the transport sector (Cont...)

July 2020

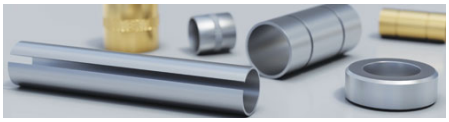
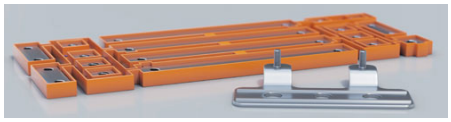
Why are fastening innovations crucial for EV battery (EVB) manufacturers?

There are a number of components which are particularly relevant for EVB assembly - fasteners with electrically isolating coatings; lightweight, non-magnetic fasteners; battery retention bolts; cable management hardware and compression limiters.

All these require fasteners to provide robust and secure settings for the costly battery. And fasteners are essential, not only in the electric vehicles themselves but also in supporting technology and applications including charging units, EV battery casings, and general infrastructure equipment.





Coatings do more than just provide protection against corrosion

An EV's battery module can be secured with inserts for plastics that are used to maintain either good connectivity where required or avoid unwanted short-circuits due to corrosion or product failure.

Fasteners for the EV batteries are designed to incorporate various coatings to suit the functionality of the joint. Examples of these include: silver plating to improve connectivity or high temperature resistant organic top coat to provide an electrical barrier.

Sven Brehler, Engineering Project Manager at TR Fastenings explains: *"Component suppliers are beginning to work closely with battery module manufacturers to develop and apply functional coatings to fasteners including protection from corrosion. These help to either maintain good electrical connectivity or retain isolation where needed to avoid unwanted electrical resistance or potential short circuits."*

Battery heat

Highly conductive coatings can be applied to certain materials such as plastic fasteners or fasteners prone to corrosion so they can act as electrical conductors, being part of the electrical circuitry. Increase in electrical resistance causes generation of heat together with loss of energy.

Sven continues; *"EV batteries can generate high levels of heat, so it's essential that it is distributed over the assembly to provide general cooling and avoid localized overheating. Busbars can support the distribution of heat from local hotspots to heat sinks, but only when correctly tightened to optimise heat transfer between the various elements. Using fasteners in thermally and electrically conductive coatings will aid an effective service life."*

Insulation coatings are advantageous

Regarding insulation coatings, in certain cases electrical currents must be contained. Barrier coatings avoid electricity from going where it shouldn't and causing interference or a risk to safety through electrocution or fire.

Specific coatings used include PTFE (Polytetrafluoroethylene) because it is highly heat resistant with the ability to retain its properties across a temperature range, from -200°C to +260°C. It also has low predictable friction, which can help to create secure joints through torque control essential when assembling the battery module.

One solution does not fit all

As well as hardware in battery casings and structures, many differing conditions also need to be considered so adopting a

'one solutions fits all' approach to applying coatings would not be appropriate.
Depending on the material and the function of a particular component and the task it performs, different solutions are necessary.

Automotive quality standards

TR Fastenings supplies from its own IATF 16949 as well as from a select range of external suppliers. The International Standard for Automotive Quality Management Systems is based on ISO 9001 and applicable to organisations that manufacture components, assemblies and parts for the supply into the automotive industry.

Only manufacturers passing strict audits and reviews by TR's fully VDA 6.3 certified auditors, and able to deliver to the highest OEM quality standards are used to provide the necessary high quality products into the battery market. This helps to ensure a stable and sustainable supply chain in addition to the engineering and logistics TR can deliver.

Early engagement in design

Manufacturers and sub-contractors must work together from the start to ensure the correct Design for Manufacturing (DfM) considerations. When cost-efficiency, sourcing, materials and product lifecycle concerns are discussed early on at the design table; costly delays later on can be avoided.

As an emerging transport sector, the fasteners needed in EV charging units and their associated structures, requires manufacturers and their supply chain to have technical knowledge and experience. There are increasing pressures and opportunities involved working within intricate global supply chain networks, and manufacturers servicing the automotive, electronics and technology sectors will be best placed to work with emerging EV related businesses.

Looking to the future

The EV sector is a fascinating one to watch as it develops and gains momentum. As the requirement for robust EV charging points grows, the automotive industry continues to innovate with fasteners playing a major role in the electric vehicle revolution.

It is a rapidly accelerating market with huge potential for manufacturers and suppliers. It is therefore essential the supply chain has the infrastructure, technology and solutions in place to meet future demand for electric car use.

Source 1: https://www.mckinsey.com/industries/automotive-and-assembly/our-insights/expanding-electric-vehicle-adoption-despite-early-growing-pains

TR Press Release

TR achieves prestigious aerospace AS9120 Certification

July 2020

International fastener specialist TR Fastenings has achieved the AS9120 Certification following an extensive audit of its operations and in response to customer demand. AS9120 recognises the continuing commitment to aerospace quality and conformance and places TR amongst a select group of companies that have been recognised for practicing the highest quality standards required in this sector.

The AS9120 Certification is specific to organisations holding and distributing Aerospace related components such as fasteners and is designed to ensure that parts are handled and tracked properly while they are en route from the original manufacturer to the end customer.

It adds almost 100 additional requirements specific to aerospace suppliers beyond the general manufacturing standard ISO 9001:2015, including traceability from receipt to delivery, counterfeit parts prevention and detection, and evidence of conformity and on-time delivery. All of which are critical for meeting the most stringent requirements of supplying components into the aerospace and defence sectors.

With a proven track record in these sectors, TR's post Brexit strategy is to focus on differentiation by using its industry experience, technical expertise and proven capabilities to further expand its business within aerospace.

Kevin de Stadler, Sales Director at TR Fastenings comments: "It was a long process but the rigorous work behind it further strengthens TR's position within this sector and guarantees the highest level of competence. It's proof that we are committed to being a major player in the supply of fastenings to the aerospace and defence industries and continuing to increase our footprint.

"It will open up opportunities such as improved performance against competitors and expansion of our UK market. We also hold ISO 9001 and 14001, however, AS9120 sets us apart in the industry and now firmly positions us at the forefront of fastener provision in this highly regulated sector."

TR Press Release
30 years with TR Fastenings

July 2020

2020 marks 30 years with TR Fastenings for Glenda Roberts. She recently stepped down from the Trifast plc Board, as she considers her retirement plans and will be working on special projects. She has seen the company grow from a UK business to become a global Full Service Provider.

Here editor Will Lowry, speaks to Glenda about how the Group, and the market, has developed over the last three decades, and about future opportunities.

Although Glenda is celebrating her 30th anniversary at TR Fastenings, she's actually been in the industry a little longer. Before joining TR, she had been with another fastener company for seven years. "When I first joined, TR had already positioned itself between the manufacturer and the customer. It was a smaller company with 8 sites focused very much on the UK market – and it was doing very nicely developing JIT fastener supply systems inside larger customers".

Then Glenda remembers that a standard enquiry could take two to four weeks to complete using post, telex and fax machines. "Developments such as the internet and email connected us to the world, and really helped us to take a leap forward. Mobile phones weren't commonplace when I first joined the company. Very few people had them, and everyone was nervous about using them because of the cost - how far have we come today when everyone wants instant responses?"

In 1998, TR Fastenings decided to expand outside of the UK, largely because its customers and other businesses were migrating to countries with lower manufacturing costs. "We would have lost these customers if we hadn't taken that decision," says Glenda. "I was asked to put together a global team and to follow the business initially to China and India. That success led TR to open operations in other parts of the world to support global customers."

"We carried the processes and the direct line style feed systems from the UK to the new customer locations. Not only did this help to keep the business, it was a big success story for us. We made it easy for companies setting up in these new areas to have consistency of supply, processes and services. Continuing this successful strategy, TR Fastenings opened operations in America, China and India and has continued that strategy today adding Hungary, Italy, Germany, Spain, Thailand and the Philippines in recent years. Focusing on large global companies, and our tier one suppliers, rather than going after local business, was undoubtedly the best thing we did. We worked with companies that needed the services and support that they were used to getting from the UK and Europe."

"Working with these multi nationals, and their global commodity teams, enabled us to demonstrate how well we could service them almost anywhere. Consequently, they were keen for us to work with them in other countries, and so we were able to meet their needs at their locations – whether in Europe, America, or Asia."

Wherever customers have moved geographically, TR has identified opportunities to acquire manufacturing businesses already

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established within those geographic markets. “This was another big step in our development as adding manufacturing sites to the group meant we weren’t just another distributor – we were now a full-service provider and it gave us gravitas”, Glenda says. “By evolving our engineering and technical support services, we were able to work more closely with customers on applications and solutions.”

“We now have eight manufacturing sites – 32 sites in total. We are also proud of the 36 master distributors who support us, especially in areas where we need geographical coverage. They are integral to our Group and have enabled us to get our proprietary branded products to customers as quickly and effectively as possible.”

Application engineering and technical support

TR sees this as a key part of its success story, and this enables the company to work closely with its customers with early involvement at the design and development stage.

“A high percentage of the parts we supply are dedicated customer specials to customer drawings. But often there is a need for technical input to assist and this is where our engineering teams are involved”, explains Glenda.

“Building up these relationships and supporting the different disciplines on a customer’s site encompassing quality, logistics, sourcing and technical demonstrates that we understand their needs and can meet their requirements.”

“Whilst working with customers has become easier, their requirements have become much more demanding over time”, Glenda tells me. “They have very specific needs and wants. There’s also a lot more documentation these days, with more detailed work involved. We even have in house lawyers to deal with the vagaries of the contracts that each new piece of business entails. Some companies might see this as a challenge, but thanks to our experience, knowledge and capabilities, we are more than able to meet these requests. This hopefully helps us stand out.” Glenda continues, “We are no longer just supplying a humble fastening; these products do an important job and could be involved in a safety critical application. Therefore, guaranteeing quality and reliability is essential.”

“A lot of contracts, especially for the automotive market, can be for five to ten years. This means we have to make sure we get everything right and are flexible enough to accommodate any changes that might happen. Customers have heightened expectations on quality with zero ppm as a requirement. However, we believe it’s really about having a zero-defect philosophy – because that encompasses everything we try to do”.

Handling Covid-19

The Covid-19 pandemic is unprecedented and certainly has proved one of the most challenging times in Glenda’s 30 years at TR.

“Because our operations are located around the world, we felt the impact of the virus from the first outbreak in China, and we monitored this as it spread globally,” says Glenda. “Our first concern was to make sure our staff were safe, and all of the correct health and safety protocols were in place. After this we focused on supporting our customers and our vendors.” TR set up a Covid-19 task force, which included the board and key personnel, to help it manage its supply chains and customer base. “When you are an FSP there is no buffer as you are the only line of supply. “As part of our business continuity plan that originally was put in place during the SARS outbreak, we looked at all the risk factors, the numbers of weeks stock and in WIP for every customer special. Then we mapped out where our vendors were based compared to the virus epicentres. This enabled us to stand back and evaluate whether we had supply issues

July 2020

looming. We went into minute detail as it was no small task, but it was important to do it thoroughly. There have been challenges along the way, but customers have not been impacted and we have had great support from our vendor base."
Glenda believes the next challenge is the length of time it will take markets to get back to 'normal' post Covid-19. "The pandemic will undoubtedly impact companies – particularly those in the automotive industry, and liquidity will become a critical factor for many. The shape of recovery will also have a huge impact. Will it be a 'U' curve, a 'V' curve or a fast return to a new normal? She believes the next three months will give us a good indication of how things will develop. "TR is in a strong position financially, so we can manage the current situation. It won't slow us down or prevent us from focusing on opportunities and interesting markets for the future."

Future opportunities

"Coming out of the pandemic we see opportunities in providing even more product to the Medical industry. The move to 5G and the infrastructure requirements is another area of focus as we have worked on projects for 3G and 4G in previous years."

"But the key and potentially the largest growth area is in supporting builds in the EV sector which is the future. If Covid-19 has taught us anything it is that our health and welfare is paramount, and a cleaner environment is essential. We will have to adapt to the materials we'll be working with in the future, such as composites, and how we adapt to any new opportunities this may create. For instance, we are currently looking into silver plating for fasteners, which is not as common, but this is required along with the need for electro-static finishes in applications involving EV batteries. This is an example of how we are being pulled into new areas and providing the right products for these applications. These new opportunities are fastener rich which is good for our industry and I think we are all in for an interesting time".

Credit:
Will Lowry - Editor
Fastener + Fixing Magazine
www.fastenerandfixing.com

TR Press Release
Fixing the mobility future

August 2020

By Ian Parker

Catastrophe theory is a branch of mathematics which looks at sudden and often unexpected change. Such events are usually both good and bad. They can be anything from a bent ruler suddenly flexing the other way to the spread of a new virus. And they're not unforeseen by everyone. Bill Gates warned of a virus pandemic five years ago. Selling prevention is always much harder than selling cures.

When a catastrophe is underway, changes can be rapid as can human responses to them. Everyone can see that the Covid-19 pandemic is firstly a health issue, but it will go on to affect much more than that. Mathematicians are not the only people trying to see where things are going. Engineers are too, including those in the fasteners and fixings business.

How will recent trends, reinforced by the pandemic, affect transport and what developments will the fasteners business have to make to support them? Will there be much less travelling and will many people eschew public transport to avoid getting close to others? Will travel and transport broaden out into mobility, with a much wider range of vehicles and their operation?

TR ponders the issues

Some 34% of TR Fastenings Ltd's business is in automotive, so the company has a great interest in where the business is going. The company is part of Trifast plc and is an international specialist in the design, engineering, manufacture and distribution of high quality industrial and Cat C fastenings principally to major global assembly industries. TR has 32 business locations within the UK, Asia, Europe and the USA including eight high volume manufacturing sites. TR's manufacturing network represents a third of the group's business.

It was founded in 1973 by Mike Timms and Mike Roberts who gained their business knowledge through previously working as managers in the fastener industry.

In 2018 TR Fastenings celebrated 45 years of "Holding the world together". Today, it has some 1,300 colleagues working in 32 divisions in 18 countries across three continents, with three Technical and Innovation Centres located in the UK, USA and Sweden. TR's first Centre opened in 2018 and is in the heart of Sweden's automotive industry, on the Lindholmen Science Park in Gothenburg which is home to many of the key players developing forward-thinking solutions for the automotive market, including Electric Vehicle (EV) technology. With major OEM firms and IT software developers and technical and engineering teams from Tier 1 manufacturers, Lindholmen is fast becoming a hub for automotive innovation in Europe.

Sven Brehler, engineering project manager at TR, spoke to Fastener and Fixing Magazine about how he sees the transition from automotive to mobility. He says "We use the term mobility because there may be a lot of changes following coronavirus. For example it may hasten people towards electric, self-driving vehicles. The whole automotive sector might actually physically change away from the combustion engine and steering wheel control."

But will the adoption of electric propulsion make that much difference to the fasteners used in vehicles? Brehler thinks it will. He continues "Electric vehicles are designed on such a different platform - for example we can drive individual wheels or we can work though a gearbox or converters - we have many more choices than we have with a conventional car. We use the term mobility because units may become smaller, if we can get round the status symbol element of a car, particularly in the UK.

"Home deliveries from companies such as Amazon, Ocado, Tesco and Asda etc, have increased dramatically during the lockdown and if autonomous vehicle development is pushed forward, we might be able to include that in mobility as well. We don't know yet what directions such things might take."

Being ready for such changes is not easy and companies will need to watch the market closely and move quickly. TR is watching the mobility business with keen eyes as a large proportion of its sales are in that area and it's increasing. The company's automotive business has just hit 34% of sales and could go higher as this sector becomes mobility. Smaller vehicles may mean more vehicles and so more fasteners.

Even though the automotive industry is currently hard hit by the effects of coronavirus, the mobility industry will remain an important sector in the near future. There will likely be some large changes to the current automotive industry in the next decade, and the need for individualised mobility will rise. Therefore, the company expects the mobility industry to be a large part of its future business, but with more diversification into other markets, such as healthcare and automation.

Brehler continues "The new technologies required for development and maturation of the New Energy Vehicles (NEVs) and the subsequent energy supply has seen a large influx from technologies developed in other industries, such as the mobile technology and aerospace market. Our expertise in high tech applications, electronics and electrical switch gear has allowed TR to follow and support the advances in electrical propulsion, storage, charging and infrastructure for the transport of tomorrow.

"The current standstill of production has allowed the OEM and Tier 1 suppliers to take stock of their current designs and projects still in the pipeline, the main focus being on overall reduction of cost and weight without compromising on the current designs. They start to contain more mixed materials, including composites and honeycomb structures, which benefit from bonding. However, adhesives need large contact points between the materials to be able to create structural joints, favouring mechanical fasteners for lean and slender designs. Furthermore, a refocus on maintenance and repair as well as reuse and recyclability prefer the application of removable fasteners."

What effect will NEVs have on fastener demands? Interior and trim applications are expected to maintain a similar route to reduce weight whilst promoting an increased modularity to allow customer's individualism at lowest assembly costs. The greatest disruption to the original bill of materials will come from the change in propulsion and the safe storage of on-board energy.

Ensuring safe storage and delivering it to the propulsion on demand requires electronic control mechanisms which cannot be disrupted by electro-magnetic waves or affected by corrosion, contamination or moisture. This is where there will be a growth in uptake of isolating coatings and non-magnetic fasteners. Initial NEV designs used bolted-on batteries, whereas new designs are looking to integrate the battery assembly as part of the structural design of the vehicle. Battery retention bolts and compression limiters are playing a large role in the materialisation of these designs to allow transfer of forces through the structure, whilst allowing access for repair and maintenance. Well designed cable management will secure the ever growing wiring looms for delivery of energy to all parts of the vehicle and report back any key information picked up by the multiple sensors.

Quality and recycling

Reliability and quality are controlled through fastener traceability from manufacturers on the AVL (approved vendor list) which are signed up to TR's code of conduct following a thorough auditing programme.

This avoids the introduction of counterfeit or products with questionable quality to enter the supply chain. Brehler says "Early involvement of application engineers allow our customers to optimise the design by selecting the right product to suit the requirements. System testing has been a mandatory requirement within the automotive industry. We cannot stress enough the importance of these

tests as they can make a difference in case of a vehicle accident. The PPAP (production part approval process) proves that parts are manufactured to the required standards.

"The majority of fasteners have a high content of steel, which can generally be reused in the recycling process. The automotive industry has been a forerunner restricting dangerous materials, making recycling of fasteners possible without the need of firstly needing to separate them from the rest of the scrap. Our plastic fasteners are generally manufactured of similar hydrocarbons used in trim and interior applications, allowing these parts to follow the main recycling stream. When involved with new projects and applications TR's application engineers consider the removability of the fasteners as well as the installation and function during operation."

Thailand and the EVAT

In keeping with its international and forward-looking philosophy, TR Formac, part of Trifast plc, has expanded its global presence by moving into larger premises in Prawet, Bangkok, in response to strong growth across Asia and winning new business from global OEMs. The new facility provides around 3000 sq. ft. of space enabling the company to trade more efficiently and to help further strengthen its position in the growing EV market.

Operations in Thailand are headed by Country Manager David Ng, who has witnessed the fast development of the automotive sector across the country. Chris Black, Global Director of Automotive Business Development, will be supporting Mr Ng and the TR Formac team to increase their market share of the automotive EV sector, sharing his experience and knowledge with the Thailand team.

Ng says *"There are huge growth opportunities in Thailand with key focuses on technology and innovation of electric vehicles. With this in mind, and to collaborate with other companies, we decided to join the Electric Vehicle Association of Thailand (EVAT) which the Thai government was instrumental in launching.*

"There are three phases involving intensive R&D to enable the production of 1.2 million units by 2036 and 690 EV smart charging stations. All types of electrified vehicles are on the agenda - battery, hybrid, plug-in and fuel cell. Moving into bigger premises facilitates our continued growth; it's a key part of our strategic business development initiative to move us forwards."

EVAT was set up in 2015 by individuals from the private and public sectors to promote and support industrial manufacturing, research and development, and EV usage in Thailand. There has been strong recognition within the country, specifically at government level, to strengthen knowledge and global competitiveness of Thailand as an EV manufacturer. Supported by the Ministry of Energy and the Energy Regulatory Commission, the EVAT enables members to exchange information and initiate changes towards a low-carbon transport community.

TR's manufacturing capacity in Malaysia, Singapore and Taiwan totals over 359,000 sq. ft. of factory space producing 525 million components per month. Thailand is the 13th largest automotive parts exporter and the sixth largest commercial vehicle manufacturer in the world with aims to become one of the top performers in the global automotive market. PSEP (Power Steel & Electro-Plating) in Malaysia was acquired in 2011 and the Thailand office opened in 2013.

Responding to the Covid-19 pandemic will require a huge range of responses from many industries and the companies which will benefit are those which can look ahead and move quickly. Most people would probably think that the fasteners business would be not be affected at all and certainly not quickly. But the reality is very different.

Following the pandemic, transport will probably never be the same again. There will be winners and losers and in some cases it will be extreme. As Zoom is finding in the IT sector, it is an ill wind that blows no one any good. TR is watching the weather and setting its sails for maximum benefit.

TR Awards

TR Holland receives 100% delivery commendation sixth year in a row

May 2020

TR Fastenings has once again received recognition for its 100% delivery record from Signify (formerly Philips Lighting) for the sixth year running.

A 0% failure rate over a 12 month period is an impressive achievement as TR supplies over 400 lines of C-class products to Signify in Eindhoven, Holland, including screws, nuts, clips and plastic components. TR Holland has supplied into Philips since 2008, providing technical expertise for bespoke parts and establishing a strong and collaborative relationship over the years.

This year, due to the global COVID-19 crisis, the judging and award certification took place over Skype. Signify recognised the high performance of Hans Nijhof, Laurens Wekking and Jeanette ter Riet from the TR site in Oldenzaal, who continue to provide excellence in delivery services to customers.

Ron Vlutters, Managing Director of TR Holland, said: *"Our on-going commitment to provide exceptional services across our entire business remains as strong as ever. It has been a challenging time with priority given to the health and safety of our employees but we have adapted and reacted quickly to ensure delivery and services levels to our customers remains high. We are delighted that our hard work and dedication have been recognised for another year and I am very proud of the team."*

TR Awards

TR Fastenings hit a hat trick at North America automotive supplier awards

May 2020

International fastenings specialist, TR Fastenings (TR) has been recognised as a 'Distinguished Supplier' by Yanfeng Automotive Interiors for the third year running.

Yanfeng Automotive Interiors (YFAI), the world's largest supplier of automotive interiors, recognised 19 of its suppliers during the 'North America Supplier Performance Awards Ceremony' on 6 February, held at the company's Michigan Tech Center.

Jose Vera and Brad Allen, Business Development Managers at TR USA said: "*It is a huge honour to receive this recognition for 'Flawless Execution'. These Awards celebrate suppliers' outstanding track record in quality, cost, logistics, development, technology, and service and to be acknowledged in this way is testament to TR's commitment to providing our customers with consistently high-quality products. We are very proud of the strong relationship we have with YFAI, which is built on our teams' exceptional industry knowledge, manufacturing excellence, and outstanding customer service.*"

Jim Bos, Vice President, Global Procurement, for Yanfeng Automotive Interiors said: *"Each year, this event is an opportunity for us to recognise our suppliers for their commitment to excellence. Their dedication enables our team to provide our customers with the high-quality products they've come to know from YFAI."*

TR has previously been granted Distinguished Supplier status by YFAI (in 2019), following its award for Supplier Excellence in 2018.

TR's USA team is supported by the company's manufacturing colleagues in Taiwan.

TR Community

TR Fastenings Inc putt their skills to the test in a tee-rific charity golf match

January 2020

TR Fastenings Inc was invited by Yanfeng Global Automotive Interiors to take part in the 21st Annual Plymouth Community United Way 'Tee Off For A Friend Golf Classic and Dinner' on the 15th August 2019, held at Fox Hills Golf & Banquet Center.

The TR team were playing alongside the Yanfeng team:

- Kellie Smolenski, Commodity Manager (Metals)
- Kyle Riendl, Direct Buyer (Metals)
- Rachel Maxheimer, Metals Buyer
- Kris Warren, Senior Buyer (Metals)

The TR team consisted of:

- Jeremy Scholefield, Director of Strategic Business Electronic Sector
- Brad Allen, Business Development Manager
- Joe Haymes, Strategic Sales Manager
- Jose Vera, Business Development Manager

Plymouth Community United Way

The organisation works to address the basic human needs of the residents of Plymouth, Canton and Western Wayne. Advancing the common good is less about helping one person at a time and more about changing systems to better serve us all.

Plymouth Community United Way's work is focused on the building blocks for a good life:

- Basic Needs - Supporting food pantries, providing emergency assistance
- Health & Stability - Connecting families to resources to enable greater independence
- Education - Helping children and youth achieve their potential

PCUW's goal is to create long-lasting changes by addressing the underlying causes of these problems. Living united means being a part of the change. It takes everyone in the community working together to create a brighter future.

Joe Haymes, Strategic Sales Manager at TR Fastenings comments:
"The TR team had a great day and would like to thank Yanfeng for giving us the opportunity to help raise funds for a very worthy cause."

TR Community

TR Kuhlmann take part in a MINT Chess event

January 2020

On Saturday 30th November staff from TR Kuhlmann held a chess event, that was organised with local registered association Mint-Technikum (Mathematics, Computer Studies, Natural Sciences, Technology), who have created a meeting centre for children and young adults to awaken an interest in science and technology from an early age.

The centre offers both children and young adults the chance to experiment, design and build. This enables them to share their interests and ideas and to work together and collaborate on development and research projects, through this they are challenged through a wide variety of tasks.

There are "MINT experts" who are available to assist the young researchers to implement their own designs, this means that interest and innovation is generated and introduced early. Until now there has not been an available facility in the region, where young people can experience, partake and design technology outside of school.

Peter Henning, Managing Director at TR Kuhlmann Comments:

"Everyone had a brilliant day, thank you to all who took part!

The children who participated were extremely motivated and produced their own chessboard a few weeks prior to the event and we helped them to finalize their creations on the day. It was great to see such a variety in each design and we even had chess pieces made from fasteners!"

TR Community

TR partnering with local college as Enterprise Advisers

January 2020

Helen Toole, Group HR Director and Luke Murphy, UK HR Manager based at TR's headquarters in Uckfield, have partnered with the local college and will work with them to provide support as Enterprise Advisers.

Enterprise Advisers are being partnered with local schools and colleges to become part of an influential nationwide structure of outstanding business volunteers, who can present knowledge of their sector and how it fits in to a local and far reaching business community.

Launched in 2015 by Skills East Sussex, the East Sussex Enterprise Adviser Network is funded by the Careers & Enterprise Company and East Sussex County Council, meaning this is a component of an increasing nationwide network.

In the UK, there are over 1,300 schools and colleges being supported with arrangements in place to grow this figure. Organisers are hopeful as partnerships increase and evolve that this will mean business and school linked activities will improve, resulting in long-term goals being met.

Striving to accomplish East Sussex County Council's Employability and Skills strategy, businesses from priority growth areas e.g. construction, creative & digital, engineering and lots more, are being matched with secondary, further education and sixth form colleges to rekindle their business and education links.

As Enterprise Advisers, Luke and Helen will help to develop an employment engagement strategy, in which they are able to help Uckfield College to engage their students with local businesses and aim to have a long lasting worthwhile impact to be able to support locally whilst making a difference.

By helping Uckfield College evolve with an Enterprise and Employer Engagement plan, consisting of activities and advice that publicises career paths and employability skills, they will recognise their preferred fields and be able to support other advisers involved in the network, to share ideas and best practice. Once this is completed, it is evaluated by county councils and schools.

Luke Murphy Comments:

"It is so great to be able to be part of this network, to know that the work me and Helen will be providing will be able to have a positive impact on young adults, by creating long term careers advice and guidance."

TR Community

TR Fastenings all 'fired up' for National Apprenticeship Week 3rd to 9th February 2020

February 2020

Apprenticeships
National Apprenticeship Week
3 to 9 February 2020

TR Fastenings is proud of the apprenticeship programmes it has offered over the last 9 years, from warehouse, to quality, sales, admin, marketing and HR to finance and IT, apprentices are introduced to all aspects of our business and operations, across our global locations.

We believe that an apprenticeship provides an excellent foundation on which to build a solid career and we have seen the incredible achievements of our apprentices who gain hands-on experience and go on to develop rewarding careers within our company.

At TR Fastenings, an apprenticeship comes with over 45 years of our knowledge and commitment to training and developing our people. It's our on-going commitment to develop their technical and professional skills which continues to be an important priority for us. Our apprentices work on real products and projects that shape the future of our industry.

In support of National Apprenticeship Week 3rd to 9th February and throughout 2020, TR Fastenings will be raising the profile of its apprentices and showcasing how they are making an impact in the business. We will be celebrating the diverse range of talent we have in the company and the value they bring to us.

Click here to view more information on our apprenticeship schemes.

TR Community

TR Fastenings Inc encourages STEM careers by sponsoring local High School's Robotics Club

March 2020

tompkins robotics

TR Fastenings Inc, the TR Fastenings (TR) North American business, sponsors the Obra D. Tompkins High School's Robotics Club, better known in the FIRST Robotics Competitions (FRC) as the Steel Talons.

Established in 2015 and based at the Robert R. Shaw Center, Katy ISD's STEAM center, the Tompkins Robotics students are driven to represent the school's values; Integrity, Fairness, Discipline, Modesty and Respect, whilst gaining valuable knowledge about building robots; TR will be providing fasteners for the robots that are created by over a hundred aspiring young students.

A new FIRST Robotics Competition season begins early January, in which the team have around eight weeks to plan their design as well as construct a new robot, that fits the requirements provided for that year. Their busiest season is January and February, then followed by the weeks that lead up to a district competition in March and April.

Building their first robot in January 2015 at a mentor's house, they shortly moved into the newly built Robert Shaw Center (RSC) in March that year. The following January, they built their second robot as a team at the centre, however, building a new robot every year and showcasing the team's great creations by competing in multiple events, comes at a price!

During the 2018 season they beat a personal best and won the most awards in the team's history; their winnings included the State championship, UIL Robotics State Championship and three Spirit Awards!

Retaining success in 2019, they also conquered another new team milestone and were given the opportunity to compete at the FIRST Championship, Houston in the Roebling Division for the first time in club history. Furthermore, winning the top team award in two competitions; the Channelview District competition, District Chairman's Award and the Regional Chairman's Award at the FRC District Championship held in Austin. Also receiving first place in the District Engineering Inspiration Award at the Del Rio District Competition.

Lori Cohee, Tompkins Robotics Mentor comments:
"Thank you for your generous support. We take pride in providing the opportunity to excel and we can't wait to see the great ideas that are created by our aspiring students put into practice. By doing so, we are allowing them to expand their STEM skills knowledge and abilities, allowing them to prepare for the future in STEM when they leave college.

Each fall we enrol new team members, as well as opening membership applications at the New Falcon Camp, in which all students complete the online membership form and pay the activity fee that covers a teamwork t-shirt, competition t-shirt and a small part of the competition fees or the build season costs. We have had to limit team size, due to the space restrictions at the RSC and manageability to around 120 students.

Throughout the academic year we hold STEM nights, mainly at feeder elementary schools to Tompkins High School, however, we will

March 2020

also visit non-feeder elementary schools to assist in their STEM nights, this is if another high school robotics team is not available."
Click here to watch the Steel Talons FRC 5427's YouTube video, this showcases the robots and the innovative work produced within the community. You can also follow the team on Twitter for the latest team news.

TR Exhibitions

TR's Chris Black to speak at NEAA's first Automotive Export Week

August 2020

Chris Black of TR Fastenings is to demonstrate how a UK company with global presence can generate growth around the world at the first North East Automotive Alliance (NEAA) Automotive Export Week 14th to 18th September 2020.

The NEAA is working with Supply Chain North East and the Department for International Trade (DIT) to ensure the virtual event invites businesses at every stage of the process to explore key automotive markets, learn about all aspects of export, seek support from market specialists and trade champions, build contacts and meet potential customers.

Chris, the Global Sales Director for Automotive Business Development at TR, is the industrial lead for the NEAA's trade working group, which was launched as a key part of the NEAA's 5-year strategy to better understand and support the trade activity of its members.

He will explain to NEAA members how TR has developed its automotive customer base in many countries on three continents around the world and how it is continuing to invest and expand in North America, Europe and Asia.

Chris, who has more than 30 years' experience in the fastener industry, said: *"As a full service provider to the automotive industry, TR is adept at reducing the cost of engineering projects through our teams working hand in hand with our customers to develop the right solution for them, from design through to production.*

"We're continuing to invest in our manufacturing sites and innovation centres to support our automotive customers' needs, in particular to partner with the growing number of niche and start-up electric vehicle manufacturers.

"Our experience of developing first class supply chains and providing cost benefits to customers can act as an example to other businesses and help them tackle the challenge of growing overseas."

Automotive Export Week will feature more than 40 events including country briefings, interactive panel discussions and workshops. In addition, the week will provide a platform for delegates to market their products and services to enable business matchmaking, collaboration and one-to-one networking.

Over the past 30 years the North East has established itself as a centre of excellence for automotive manufacturing. It is the second largest automotive region in the UK and accounts for 30% of UK passenger vehicles, 20% of Europe's electric passenger vehicles, 10% of all UK non-highway vehicles and produces 350,000 engines per year. More recently, it has established itself as a leading location for electrification with strengths in battery manufacturing, power electronics, motors and drives.

Paul Butler, CEO, North East Automotive Alliance, said: *"Automotive Export Week creates the ideal opportunity for businesses to expand their sector knowledge and raise their company profile with a view to boosting sales overseas and speaking directly to specialist trade advisors."*

Lawrence Davies MBE, automotive sector team, DIT, said: *"This event will bring together automotive country specialists from within the Department for International Trade and other supporting organisations and companies from across the North East and the UK. Companies at all stages of export will benefit from this amazing opportunity."*

TR Exhibitions

TR Fastenings Sven Brehler is to speak at Battery Tech Expo's Virtual Event

October 2020

On 8th October 2020, Sven Brehler, Group Engineering Project Manager at TR Fastenings will be presenting at the first Battery Tech Expo virtual event. Focusing on 'Design for Manufacture – optimising fastener function and assembly', Sven will share insight into the benefits of early design involvement and consideration of fasteners used within Electric Vehicle Battery (EVB) assembly.

This annual event usually held at world famous Silverstone will explore the future developments of electric battery technology. This year has an impressive line-up of guest speakers who will be discussing the latest breakthroughs.

This event is an opportunity to meet, connect and network in a safe, online environment with hundreds of industry professionals. The presentations will run from 10.10 to 14:20 with Sven scheduled to speak at 11:25 with supporting slides and a Q&A session to follow. You can register to attend the virtual event here or download the Battery Tech Expo app by going to your mobile app store. For Apple users click here and Android users click here.

Sven is a Chartered Engineer with more than 20 years' experience in mechanical engineering. He has gained a working knowledge over recent years through working with major Tier 1's in the automotive industry. Based in the UK and with experience of working in China, the USA and South Korea, his skill is in identifying products and materials early on in the design process, which have helped him support start-ups and OEMs.

TR Products

An increase in fastener demand to support the medical equipment manufacturing sector during the Covid-19 pandemic

May 2020

By Jeremy Scholefield, Director of Strategic Business, TR Fastenings Ltd

For over 25 years, TR Fastenings has been working with leading healthcare organisations and their subcontractors as a total solution provider of fasteners and cat c products. TR has geared up its capacity to support the medical technology industry during this critical time.

The current landscape

The outbreak of Covid-19, a major worldwide public health emergency, created an unprecedented demand for medical products, a situation never before experienced on this scale at any time in living memory. In response to the outbreak, the world turned to medical companies for vital help, which has galvanised the industry into action and to work in uncharted territories.

To meet the urgent global demand and to alleviate shortages, many manufacturers from outside of healthcare are now reconfiguring their business to develop and produce medical equipment and supplies.

It has been a high growth market for many years and according to the Evaluate MedTech Report produced in 2018, the global medical technology industry is expected to grow at 5.6% per year to reach worldwide sales of US$595 billion by 20241. Covid-19 will most likely have significant influence on this forecast in the coming months.

As the pandemic unfolded, the governments and public health services of England, Scotland, Wales and Northern Ireland established several NHS Covid-19 critical care field hospitals in various locations across the UK. These temporary hospitals, named NHS Nightingale after nursing pioneer Florence Nightingale, were set up to cope with the anticipated overflow from existing hospitals. We have also seen similar actions being replicated globally.

Medical devices are playing a crucial role in the fight against Covid-19. The critical products requiring fasteners and components are:

- Respiratory support and monitoring equipment such as ventilators, which help to treat hospitalised patients.
- Personal Protective Equipment (PPE) such as face masks and protective visors.
- Diagnostic tests which identify those infected and further limit the spread of the virus.

TR Fastenings responded to the UK Government's urgent request to support the immediate needs of established medical equipment manufacturers and new companies diversifying into this sector. With technical expertise, real time inventory availability, a wide range of fasteners and an intricate global supply chain already in place, TR has been able to accelerate time to market.

TR Products

An increase in fastener demand to support the medical equipment manufacturing sector during the Covid-19 pandemic (Cont...)

May 2020

The role fasteners play in medical devices

Although fasteners are typically the smallest components in medical devices, they play an important role in the assembly, functionality and structural integrity of the device.

Working directly with a knowledgeable fastener manufacturer early on in the design stage mitigates the possibility of a costly redesign after the product has been launched.

The challenges of working in a changing world

TR's fast-track approach to delivering a high volume of products, often within hours, supported the sudden acceleration of customers' needs. TR worked through weekends and bank holidays to respond quickly and engage with various medical companies around the world.

The main products TR supplies are sheet metal fasteners, high grade stainless steel fastenings, plastic and rubber products plus specially manufactured parts to be used in a range of medical equipment. This includes ventilators, medical beds & furniture, ultrasound machines, medical imaging equipment, defibrillators, incubators, medical computer stands, volumetric pumps & infusion devices, vacuum extractors and many other vital pieces of medical equipment.

New medical hardware products introduced

TR has introduced two new products to its range – the L-bow Handle and a Face Visor Kit:

L-bow Handle

The L-bow Handle can be retrofitted to an existing compatible door handle and allows the door to be opened "hands free" with your forearm, reducing the risk of direct contact with viruses and bacteria on the door handle.

The door opener is made from plastic with stainless steel components and works on various door types with both horizontal and vertical handles from 19mm up to 22mm diameter. Available from stock in black and to order on any other RAL colour (minimum 1000 pcs).

Face Visor Kit

The Face Visor Kit contains two Polypropylene clips and a 330mm elastic strap which is quick and easy to fit.

A secure, lockable and adjustable method of attaching a strap to a face visor. The kit can be manufactured in various colours. Simple finger pressure closure and release mechanism. The standard 19mm elastic strap can also be provided in a 15mm width, and 1mm increments up to 19mm.

TR Products

An increase in fastener demand to support the medical equipment manufacturing sector during the Covid-19 pandemic (Cont...)

May 2020

Application Engineering has proved to be key

In addition to choosing a high quality fastener manufacturer and distributor with a diverse product range, it is also important to work with a company that offers application engineering expertise. TR engineers are fully engaged in the design and make critical recommendations for the interface between the fastener and the medical device.

Due to Covid-19 lockdown restraints, TR engineers have fully utilised the Modern Workplace by using various methods of online virtual communication to ensure the customer receives the highest level of service and technical support.

The future

As the medical landscape changes, preparing for the future has never been so important. TR Fastenings is ready to meet the challenge.

Source: 1Market size extrapolated from EvaluateMedTech Report, World Preview 2018, Outlook to 2024 https://www.evaluate.com/thought-leadership/medtech/evaluatemedtech-world-preview-2018-outlook-2024

TR Products

TR Fastenings grows and invests in sheet metal portfolio

June 2020

TR Fastenings, the global specialist in the design, engineering, manufacture and distribution of high quality industrial fasteners, has made a substantial investment in its range of fasteners for sheet metal. This strategic move is in direct response to a growth in enquiries in this extensive product line, across multiple sectors.

TR has been at the forefront of sheet metal fastening solutions for over 45 years, stocking in excess of 100,000 sheet metal products and supplying to more than 5000 companies worldwide.

This large-scale investment sees expansion of its own branded Hank® Self Clinch Fasteners, a new range of K-Series® Thin Nuts, access to a full suite of brand new resources on its already extensive website and improvements to all its sales and marketing brochures, in a move designed to provide customers with greater information and clarity.

TR's Hank® brand is highly regarded throughout the global sheet metal industries and has become synonymous with sheet metal fasteners. The brand is part of a wide-ranging product portfolio and for customers looking to press, rivet or weld during manufacturing or assembly processes; TR can supply products for a whole host of industry requirements across a wide range of applications.

To support this product focus, TR's website now provides a series of educational and informative videos to help clients better understand which of their innovative products are best suited to their exact requirements. These helpful and explanatory animations – which also include product information and key considerations about each product – will reassure customers they are buying the correctly specified item. The videos form part of a wider revamp of the sheet metal industry section of the website, including in-depth product specification and FAQs.

Steve Wallis, Sales Office Manager at TR Fastenings, said: *"We are particularly proud of our latest technical animations which highlight the features and benefits of the products in a way that is easy to understand. We hope it will make the decision making process smoother for customers and with our in-house quality and application engineers, and knowledgeable sales teams, we can provide a bespoke and full service for sheet metal requirements. We are confident that TR can offer a sheet metal fastening to suit just about any application."*

TR In the Spotlight
Customer service excellence

June 2020

As well as offering a full range of sheet metal fastenings, with flexible manufacturing capabilities, TR has made significant investment in the level of support it offers to enhance its customer service. We deliver comprehensive support to our customers across every requirement, from concept design through to technical engineering consultancy, manufacturing, supply management and global logistics.

TR is incredibly proud of its track record in delivering outstanding customer care, which is reflected in the testimonials we regularly receive from many of our longstanding customers.

"I have been trading with TR Fastenings for the last 20 years as a buyer for a sheet metal company and have dealt with many sales staff at TR in that time. I have found all of them to be very professional with excellent product knowledge and very articulate and friendly.

"My job involves talking to people every day and it is a pleasure to deal with TR Fastenings. There is always a cheerful helpful voice at the end of the phone which is not the case with some suppliers I have to deal with.

"Thank you TR for your continued support, competitive pricing, punctual deliveries and excellent staff. I will continue purchasing from you and recommending you to other companies." **Chris Sandford – Buyer – Lund Brothers Ltd.**

"The TR team is friendly, knowledgeable and always willing to help." **Greg Gisborne, Havant Sheet Metal Ltd**

What sets us apart?

TR is a trusted Full Service Provider (FSP) offering engineering design and manufacturing expertise to a wide range of industry sectors. TR works with companies from early design stage right through to specification, manufacturing, quality control and logistics.

Throughout the customer journey we always aim to exceed expectations, offering a service that is both friendly and knowledgeable, based on expert engineering advice. Our response time is second to none.

At its heart, TR aims to offer every single customer a seamless professional sales service from the initial enquiry and assisting with product suitability through to order and after-sales support. It is why many of our customers have been relying on TR for their sheet metal fastening needs for decades. We think our customer retention levels are testimony to our success.

TR In the Spotlight
Customer service excellence (Cont...)

June 2020

Our industry knowledge

Fastening solutions are helping to shape the future in a number of key sectors, including electronics and technology, telecoms, HVAC, domestic appliances and sheet metal industries.

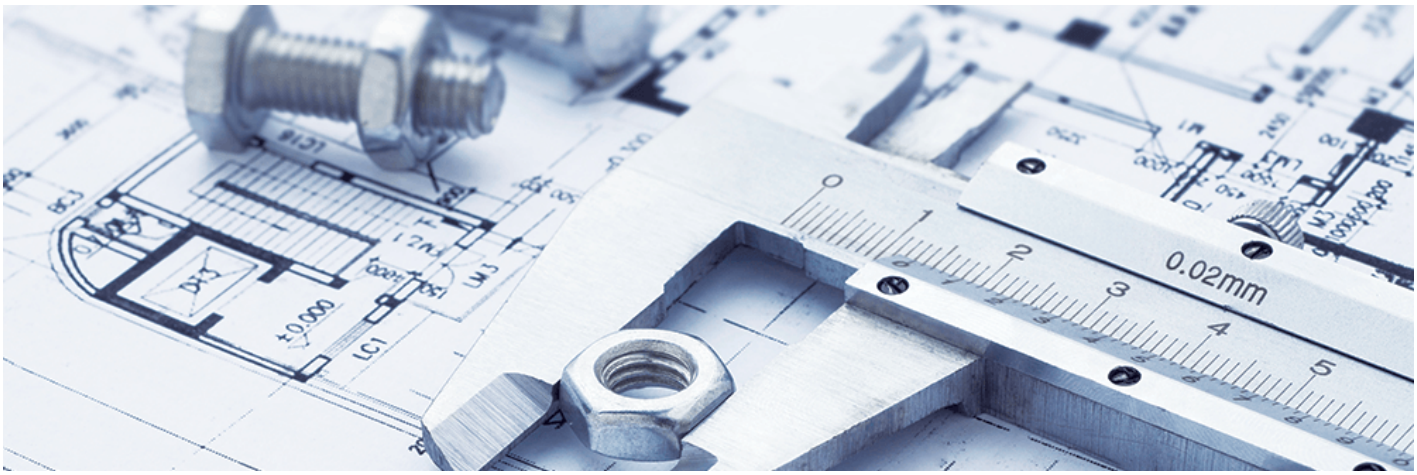
Our teams of customer service and sales operatives have a broad knowledge of industry sectors and have a reputation for building strong relationships with customers.

TR's account managers will learn everything they need to know about your company in order to deliver an effective service, be it in recognising historic requirements and new developments, or keeping up to date with challenges in specific industries. Our staff are very adept at signposting to other TR departments for engineering expertise when required and have a genuine understanding and empathy with customer requirements.

We are dedicated to helping our customers in overcoming application challenges. As well as a knowledgeable sales team, we have a bank of helpful and explanatory animations detailing product information and specific considerations.

TR In the Spotlight
Engineering and technical back-up

June 2020



There are many application challenges within the sheet metal industries. Selecting and installing the correct fasteners is one of them. Faced with increasing environmental responsibilities and unprecedented technological change, manufacturers and contractors are challenging for higher quality and smarter, application-based sheet metal fastening solutions.

Our research and technical capabilities encompass specific engineering disciplines evolved to support all sheet metal application solutions. TR offers fastener testing capabilities across a range of categories, including mechanical, dimensional, installation, and plating and finishes.

Application advice and guidance from our on-site engineers

TR's depth of engineering knowledge and technical back-up is relied upon by our customers who are seeking assistance in the selection of products best suited to particular contracts or applications. Our global technical team can offer application advice and guidance and has the expertise to assist with solutions if there is an application issue that needs resolving.

In today's competitive manufacturing environment, controlling cost and maintaining a high level of quality is a vital component of success. We offer complete confidence to our customers through our quality accreditation, which includes PPAP level 3. Here is what our existing customers say about our level of quality and expertise:

"In general it is great to work with all of the TR teams as they are always customer orientated and willing to help out. The knowledge, especially from TR's Quality Department, is great because with this they can define and detect troubles and problems.

"For specific projects, TR and HA-CO are always looking for improvements, we are now also developing a special stand-off." **Manuel Grimm, Ha-Co, Austria**

Fast response and flexible product solutions

Adapting to change in the current technologically fast-paced environment is essential. TR's global technical team is able to respond to requirements for smaller, lighter and more flexible product solutions, assist in troubleshooting and in the specifications for bespoke orders.

Where competitors' products have failed, TR's engineering team is quick to respond and in some cases this has included on-site visits to resolve application malfunction. With quality application engineers based at most TR sites, we can travel to deal with customers on a personal level if required.

TR In the Spotlight

Engineering and technical back-up (Cont...)

June 2020

Our customers, as you can see from the testimonials below, are delighted with the technical support TR offers.

"I am very happy with the way that TR Fastenings' Quality Department is providing me with solutions and answers to my concerns and questions. The department is very skilful and their knowledge is helping us to provide our customers with the information that they require for technical problems." **Bram van Maurik, Batenburg, Holland**

"We are also very satisfied with your Quality Department. Problems are dealt with quickly and solutions are found." **Michaela Kyriakidou, Dueko, Germany**

Communication, flexibility, engineering expertise and problem solving are fundamental to the service we bring to our customers. We have a robust, organised network of engineers across the globe troubleshooting application problems and helping customers with their fastening solution challenges.

TR In the Spotlight

Stock variety, variance and availability

June 2020

TR Fastenings is a leading global specialist in the design, engineering, manufacture and distribution of high quality sheet metal fastenings. Operating from 32 business locations within the UK, Asia, Europe and the USA, TR's network spans two continents and includes eight high-volume manufacturing sites delivering high quality, cost-effective sheet metal fasteners.

Supplying fasteners into c.75 countries and more than 5,000 companies, TR is a Full Service Provider working with customers from early engineering and design stage, right through to specification, manufacturing, quality and logistics.

Flexibility in service and stock availability

As a major supplier to the automotive, electronics and domestic appliance sectors, TR has a robust business model for large OEM's and SME's. We hold stock of a huge range of sheet metal fastenings and related products. As a result, TR is able to deal with a variety of different applications, including where high volumes are a requirement.

TR offers real flexibility in service, in product ranges and is able to effectively and efficiently accommodate customer needs. Our customer service and sales teams are on hand to help with any problems that sit outside of the normal stock and supply issues.

"TR always provides a fast and efficient service and helpful advice on new requirements." **IC – Operations Director - OKW Enclosures Ltd.**

Our extensive stock availability ensures customers benefit from reduced costs of stockholding and storage as only a few days' stock needs to be held on the production line. Production can focus on its core function, as standard parts are always available at the point of use.

Our automated optical sorting facilities and specialist packing capabilities mean that TR can supply quality products reliably.

Inspection costs are also reduced as quality approved parts can be shipped direct to the production line.

Logistical support

TR understands that a global approach requires specific solutions in terms of communication, culture and security. Our three-tier approach, which includes local, national and international teams, is able to address all of these challenges in order to provide customers with the quality fastening solutions and economic advantages that they require.

We offer flexible dispatch times to meet with our customers' needs. The large stocks and general availability of our products mean we can respond quickly when competitor's products malfunction or when production priorities change.

Providing a range of delivery services and flexible response times, we offer next day delivery, timed if required, self-scan if certain criteria are met, or DLF (Direct Line Feed). Importantly, our global delivery operations ensure customers' needs are consistently met.

"TR Fastenings have been a supplier to Potters for over 25 years, and as the Purchasing Manager I personally have dealt with them for over 20 years. I have always found their service to be second to none, which is why they are our main supplier of sheet metal fastenings. I would recommend TR to anyone looking to buy sheet metal fastenings, as the product range meets my needs and is of an exceptional quality. The sales team both internal and external are reliable, extremely helpful, knowledgeable, friendly and very easy to deal with." **Lea Bullen, Operations Manager, L. Potter & Sons Ltd.**

TR In the Spotlight

EV batteries are the future but we must drive improvements now

September 2020

As the new 70-plate cars roll off garage forecourts across the UK, 2020 is predicted to be another record-breaking year for electric vehicles in this country.

A report by Statista published in May forecast that electric vehicles will make up more than 10% of new UK vehicle registrations this year – up from just 3.2% of vehicles in 2016.

It is vital now that all of us involved in the EV industry work collaboratively to help the sector grow in a sustainable way.

As electric vehicles become more popular, the number of EV batteries coming to the end of their usefulness on the road will soar. But whereas traditional lead-based car batteries are commonly recycled in the UK – so much so that the majority of a new lead-based battery is recycled material – that is not the case for EV batteries.

Last year a joint study published by researchers from the University of Birmingham, the University of Newcastle and the University of Leicester concluded that the rise in popularity of EVs had not been matched by a solution to the problem of recycling the end of life waste of their components.

The researchers argued that there was an opportunity for the UK to be at the forefront of a new sector in the recycling industry to meet that challenge – potentially not only handling UK EV waste but also profiting by importing and recycling EV waste from abroad.

In Japan, Nissan opened a factory for the refurbishment of used EV batteries for repurposing in electric cars as well as vehicles requiring less power, such as forklifts and golf buggies, and in street lights. Likewise, Toyota has linked units to solar panels to provide power to shops in Japan.

The Faraday Institution - the UK's independent institute for electrochemical energy storage research - has suggested that recycled material could be a key input for the eight Gigafactories it forecasts the UK will need by 2040 to meet domestic demand for lithium ion batteries.

Securing the raw materials these factories will need, could be a mammoth task in the face of a global rise in demand, and the fact the mines producing the minerals needed aren't exactly on our doorstep. Lithium and manganese production is dominated by Chile, Australia and China, but the majority of cobalt comes from less stable countries, in particular the Democratic Republic of Congo. Concerns have already been raised by some experts that mining output of some of these minerals will not be able to keep pace with the growth in demand for electric vehicles.

While the Financial Times reported recently (6/9/20) that a number of companies are investing in Cornish mines in the hope of sourcing

TR In the Spotlight

EV batteries are the future but we must drive improvements now

September 2020

low-cost lithium domestically, a secure supply from recycled sources of the minerals needed for EV battery production in the UK would provide assurance that output could continue no matter the political situation in other countries.

Work is already underway on joint projects organised by the Faraday Institute and involving scientists and industry to increase the efficiency of batteries and make them more environmentally friendly.

The aim of the ReLiB project (Reuse & Recycling of Lithium Ion Batteries run by The Faraday Institution) is to secure the recycling of close to 100% of the materials in lithium ion batteries in the automotive sector, by identifying and removing the technological, economic and legal obstacles to it. It includes developing new methods of isolating the minerals used so they can be recycled, identifying second life uses for the components, reviewing the regulations on battery recycling to ensure they are fit for purpose - and of course encouraging the development of new businesses to actually carry out the recycling process.

All of us involved in the EV industry have a role to play in improving the sustainability of the market. Some parts of a lithium ion battery are already reusable as are the fasteners and components within EV battery housings, busbar assemblies and electrical connectors within the battery, as well as in the charging sockets and facilities. The fasteners and components include silver plated copper or brass connector pins, brass inserts, stainless steel bolts, steel self-drilling screws, aluminium connections and compression limiters. At the end of the battery's functional life, these should be easily removable for separation and recycled for use in other products, whilst allowing easy recovery of the spent battery cells.

But if we are to move to batteries that are near 100% recyclable, we need to do more.

Those designing the next generation of EV batteries must consider at the start of the process - rather than as an afterthought, or not at all - how units will be disposed of. How can we make the product as efficient and effective as possible, but still ensure its constituent parts can be quickly and easily separated for recycling when it runs out of juice?

Putting Design for Manufacture at the heart of the system is key. Designers working with suppliers from the outset can reduce the number of components in their product and increase their efficiency. At TR Fastenings, for example, our specialist teams work closely with our customers from the very early stage of the design process, with our engineers able to develop, test and put into production innovative solutions to problems.

If we are to keep the cost of replacing and recycling units down, we need to develop greater standardisation of batteries so that a one size fits all system can be created for end of life disposal of all of the constituent parts.

In addition, unless there is a sustained focus on tackling the end of life situation for the current generation of batteries, the green benefits of the technology are at risk of being undermined.

Find out more about TR Fastenings' role in the Electric Vehicle industry here.

TR In the Spotlight

TR launches new security fastener to protect medical equipment from criminals

October 2020

A new range of security fasteners has been launched to prevent offenders from stealing or tampering with equipment in hospitals and other medical centres.

The innovative 5-Lobe pin from TR Fastenings is the first complete range of security fasteners made from corrosion-resistant A4-70 stainless steel - the preferred material for all applications across the health and medical sector because of its non-reactive qualities. The fastener's five-sectioned screw head means that it can only be undone by someone with specialist tools, preventing its removal by an opportunist criminal.

A report by the think tank Parliament Street [page 4] last year revealed that suspected thefts of electrical equipment from NHS sites had increased by 33% over a three-year period. Among the items taken were cameras, computers, laptops and monitors. The losses caused not only disruption to care and extra cost to the NHS but also concerns that patient data security could be compromised.

Meanwhile, in March this year it was revealed that staff had to take urgent action after vandals were able to damage the main oxygen supply for Rotherham Hospital [source: Rotherham Advertiser 10/3/20].

TR Fastenings components are used in medical equipment, ventilators, defibrillators, furniture including hospital beds, lighting and electrical points and signage.

Fastenings for medical equipment are made with corrosion-resistant A4-70 stainless steel. The durability of the high grade material means that components need to be replaced less often and that equipment is easier to clean and maintain.

Paul Standing, Products Manager at TR Fastenings, said: *"It's vital that medical staff have the confidence that when they need a piece of equipment it is where it should be.*

"Our new 5-lobe pin fasteners provide a strong line of defence to prevent opportunist thieves and vandals from stealing or interfering with equipment that could be the difference between life and death for patients."

The 5-Lobe pin is rated as a level 2 enhanced security product and can be supplied with button or countersunk heads in either machine screws or self tapping screws. A4-70 stainless steel is a high tensile strength stainless steel with excellent corrosion resistance making it perfect for both internal and external applications.

It is used in the manufacture of medical surgical instruments and in the pharmaceutical industry where cleanliness is absolutely key - the addition of molybdenum to its composition provides the A4 grade with a greater level of corrosion resistance making it suitable for use in salt water environments, or certain chemical solutions.

TR In the Spotlight

TR launches new security fastener to prevent businesses becoming victims of crime

October 2020

A new range of security fasteners has been launched to help businesses to cut the cost of being a victim of crime from their overheads.

The innovative 5-Lobe pin from TR Fastenings is the first complete range of security fasteners made from corrosion-resistant A4-70 stainless steel - the perfect product for outdoor use, in particular in marine, health and medical sectors because of its non-reactive qualities. The fastener's five-sectioned screw head means that it can only be undone by someone with specialist tools, preventing its removal by an opportunist criminal.

A report by the Federation of Small Businesses (FSB) in October 2019 suggested that there are 3.8 million traditional crimes against businesses in the UK each year, the vast majority of them robberies, burglaries, thefts and acts of vandalism – an average of more than seven every minute, with each costing businesses an average of £3,340.

In July thieves dismantled and stole a 10m-long building in Hull, while in September a mobile sheep yard and sheep weighing equipment were stolen in North Yorkshire [sources: BBC 20/7/20 & Farming UK 10/9/20].

The Federation of Small Businesses report added that more than one in five business victims said they didn't report their case, with many saying they were either too busy or were not even going to make an insurance claim.

Public sector organisations are also targeted. The think tank Parliament Street has estimated [page 4] that suspected thefts of electrical equipment from NHS sites has increased by 33% over a three-year period.

TR Fastenings components are commonly used in furniture including hospital beds, lighting and electrical points, signage, medical equipment, ventilators and defibrillators.
Fastenings made with corrosion-resistant A4-70 stainless steel do not degrade if they come into contact with salt water and other chemicals that have an impact on other forms of steel. The durability of the high grade material means that components need to be replaced less often.

Paul Standing, Products Manager at TR Fastenings, said: *"Opportunist thieves and vandals are always on the look out for an easy target so it's vital that businesses have the right level of security to defend themselves and their property.*

"Our new 5-lobe pin fasteners provide a low-cost, long-lasting line of defence against intruders that could cut the amount of money businesses lose in thefts, damages, disruption and increased insurance premiums because of crime."

TR In the Spotlight

TR launches new security fastener to prevent businesses becoming victims of crime ... Cont.

October 2020

The 5-Lobe pin is rated as a level 2 enhanced security product and can be supplied with button or countersunk heads in either machine screws or self tapping screws.

A4-70 stainless steel is a high tensile strength stainless steel with excellent corrosion resistance making it perfect for both internal and external applications.

It is used in the manufacture of medical surgical instruments and in the pharmaceutical industry where cleanliness is absolutely key - the addition of molybdenum to its composition provides the A4 grade with a greater level of corrosion resistance. Its composition means it is also perfect for use in marine environments.

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