

AEMT

Volume 19 Issue 3 www.theaemt.com

Journal

ASSOCIATION OF ELECTRICAL AND MECHANICAL TRADES



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AEMT Award Winners 2019

The AEMT Conference on Digital Technologies

A visit to Houghton International in Newcastle

An onsite 55MW steam turbine-generator overhaul by SULZER

Rotamec rewind service helps a brewery keep its fizz.

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President's Welcome

When assuming the Presidency of the AEMT from Gary Downes, I was clear to lay out my agenda for the coming years. I wanted us to consider how this proud and traditional organisation was to remain as relevant in an increasingly global, digitalised market, such that we can serve the interests of our members in the best way possible.

I am keen to ensure that we represent the voice of our industry, whatever service or products are offered. That we represent the industry correctly in relevant arenas, such as legislation and standards development. That we continue to offer practical and effective services that add value to our members. It is also important that we stand as a thought leading organisation, always prepared to challenge current thinking and to encourage our membership to adapt to the changing markets we service, both by sharing new ideas, but also by working with members to adapt and grow.

To achieve these aims, we need to consider what we are. What we represent, what value we add and how we are seen. To support this, we are looking at several key areas of our business that effect this. What is our mission statement, what do we propose to do for you, our membership? Do we engage effectively, if not how can we improve? Is our current organisational structure the right one? How do we look to the outside world in terms of our brand, our facilities and our presentation? From here we have instigated several changes.

Firstly, I am pleased to confirm that we are adding new members to the council, representing a diverse section of our industry, with new ideas and perspectives. We have commissioned new operating systems, to include a bespoke CRM tool aimed specifically at trade associations, allowing us to communicate better with our members.

We will continue forward to consider our organisational structure and location of our offices, making the association open for business to our membership.

We are privileged to have a healthy financial position and it is incumbent on the council and its officers to ensure that this position translates into value for the membership.

This translation should be viewed as new energy, new people, new services and a new position within our industry. As part of this, I urge you all to consider how you as members engage with the AEMT.

We need your input and involvement. We need your ideas and most of all we need to know what you need us to do to better serve your requirements.

So please do get involved. It was fantastic to meet so many people at the Conference and Awards in November, but please try and find time to join some of the other great events that Thomas, Sam and the team organise. And if there are areas that you feel need addressing, please let us know.

Dave Hawley
AEMT Honorary President



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Journal

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Front cover photos:

Houghton International's new pump service division.

The Journal featured at the new AEMT Virtual Stand.

Sulzer onsite balancing of steam turbine.

ADVERTISING

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EDITOR'S COMMENT

It's been a busy final quarter, with the Conference, Awards and many people to train on handling Ex equipment in their workshops. There have also been some other interesting projects we've worked on at the Secretariat.



To start with we have launched our first virtual exhibition, which we hope will help elevate the good work AEMT service centres do for industry. As people flock to experience a Virtual Exhibition, we also hope to receive many visitors as the exhibition takes off. I hope you will enjoy visiting yourselves. industryexpo.online/show/aemt

In September we contributed towards a publication focusing on how Europe can reduce its carbon footprint. The European Copper Institute worked on the document to circulate to European policy makers, and we are proud to have the service and repair industry acknowledged within its pages.

Karl Metcalfe, Technical Support for the AEMT, outlines the potential impact and benefits of the new international repair standard we should all now be working from – IEC 60034-23:2019.

With the next decade knocking on the door, we asked our Legal Helpline partner, Croner, to provide some advice on upcoming changes to employment law.

With a difficult to reach 55 MW geothermal steam turbine-generator in Indonesia, Sulzer outline an onsite solution, which reduced their customer's downtime to only 45 days.

Aiming for zero downtime, a UK coatings firm extends its pilot period using ABB's smart sensors for predictive maintenance.

A world-famous brewery has a failed backup compressor. The machine adds the fizzy head to their beers. Without a backup in place, the company approaches Rotamec, who carries out a quick repair.

Rotary Engineering has been busy working on improvements to their popular HV coil spreader, now with an integrated radii forming tool. The tool will significantly speed up the manufacture of diamond coils.

I visit Houghton International to find out the secret to the company's success. Michael Mitten describes his 2020 vision, expansion into pumping, and how the company's values were pivotal in creating the growth the organisation enjoys today.

AEMT Member's were lucky to visit the Amazon Rugeley Fulfilment Centre in October. Starting at a local meeting venue member's received updates from the AEMT and enjoyed some speed networking before heading over to Amazon.

This year's conference was another success with some fascinating presentations and displays to visit. My introduction to the conference has been included for your interest, and all presentation's and photos are available for members to download from the conference website.

Finally, we celebrate this year's winners of the AEMT awards. With another year of sterling entries, and a gruelling judging process to decide the winner; this year's winners can be truly proud of their accomplishments.

Thomas Marks,
Editor.



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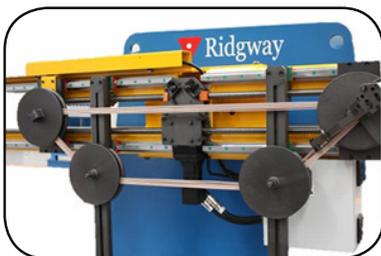
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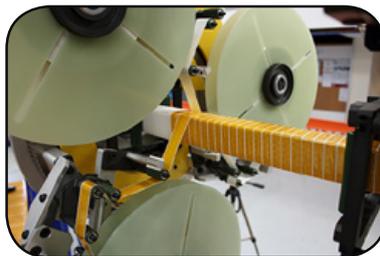
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The AEMT goes virtual... Exhibition

The Association of Electrical and Mechanical Trades (AEMT) has launched an online virtual exhibition stand to open-up the trade association’s benefits to a wider audience. The latest digital marketing tool is now live for visitors to check out the services and support available to members, but more importantly to highlight what members have to offer for industry.

AEMT Secretary Thomas Marks, who is responsible for developing various communication platforms ranging from the AEMT Journal to the conference and awards comments, “We have to embrace new technology, not just in terms of what our members can offer, but in the way we communicate what we do. The virtual exhibition stand is on 24/7 and is easy to access from any web browser, it also looks very realistic, so is an ideal platform for us to connect with many more professionals.”

The AEMT live exhibition stand provides a fast, visual snapshot of what the association stands for and the electromechanical benefits its members can bring to all industries. Subjects range from hazardous area equipment repair to sustainable repairs and increasing the efficiency of motor driven systems. The stand is open to all visitors and while visitor registration is not mandatory, there will be several features and options



coming soon to those who do share their details. This includes a Member’s Area which requires a login. The AEMT

live virtual stand will also appear at the forthcoming virtual exhibition IndustryExpo.online ■

Decarbonising publication to spur new thinking on motors and generators

The Association of Electrical and Mechanical Trades (AEMT) has advised on the content of a new booklet, *DecarbEurope*, which is being distributed to policy makers and legislators around Europe.

The objective for *DecarbEurope* is to inform political and industrial leaders about issues surrounding decarbonisation across Europe, and to discuss cost-effective and timely solutions. It was produced by the European Copper Institute, which consulted with several influential industry bodies across Europe, including the AEMT.

Thomas Marks, Secretary to the AEMT, explains that part of the association's remit is to shape the industries its members serve: "While much of our work is providing services directly to our members, we also work on a wider canvas where we engage with government bodies and other institutions to promote members' long term interests." Currently, 50% to 70% of all the electricity generated in Europe is used to drive electric motors, and the population of motors is likely to grow significantly with the rise of electric vehicles and domestic heat pumps. The AEMT is recognised for its expertise on ensuring the efficiency of electric motors and generators.

The booklet covers many subjects, some that could have an immediate effect, others that are more long term. It notes



that carbon emissions are a worldwide problem, not one confined to just Europe, and includes the calculation that Europe alone has the potential to reduce energy consumption by 23 TWhrs a year by implementing efficiency measures using currently available technologies. For instance, it states that half of all motor systems would save energy if fitted with variable speed drives.

"On a practical level, *DecarbEurope* promotes the regular revision of energy efficiency standards to keep pace with development in the enabling

technologies," explains Thomas. "It also encourages faster replacement of old, relatively inefficient motors with new, greener ones.

"Importantly, it encourages the adoption of motor designs that make repair, re-manufacturing, and durability as attractive as possible, which is an issue close to the hearts of AEMT Service Centres."

As well as printed copies, *DecarbEurope* is available online at <https://www.slideshare.net/sustenergy/electric-motor-systems-decarburope>. ■

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Is your machinery repaired to standard?

IEC BS or EN 60034-23:2019

The new international standard to ensure the efficiency of rotating electrical machinery is maintained after being repaired, overhauled, or reclaimed.



- ✓ A more **sustainable future** can be achieved if service centres follow the best practices outlined in this standard.
- ✓ **Carbon emissions can be reduced** when rotating electrical machinery is put back into service, rather than scrapped and replaced.
- ✓ The **cost-savings** of a good repair over a poor repair can save disruptions in production down the line.

5 Questions to ask your AEMT Service Centre:

Should I repair or replace the equipment?

Your service centre should present you with the facts so you can make an informed decision on whether the equipment should be repaired, or replaced with a more efficient machine.

Is the efficiency maintained after service?

Your service centre should be able to maintain the efficiency of the machine or improve it after servicing.

What is the end-of-life recycling practice?

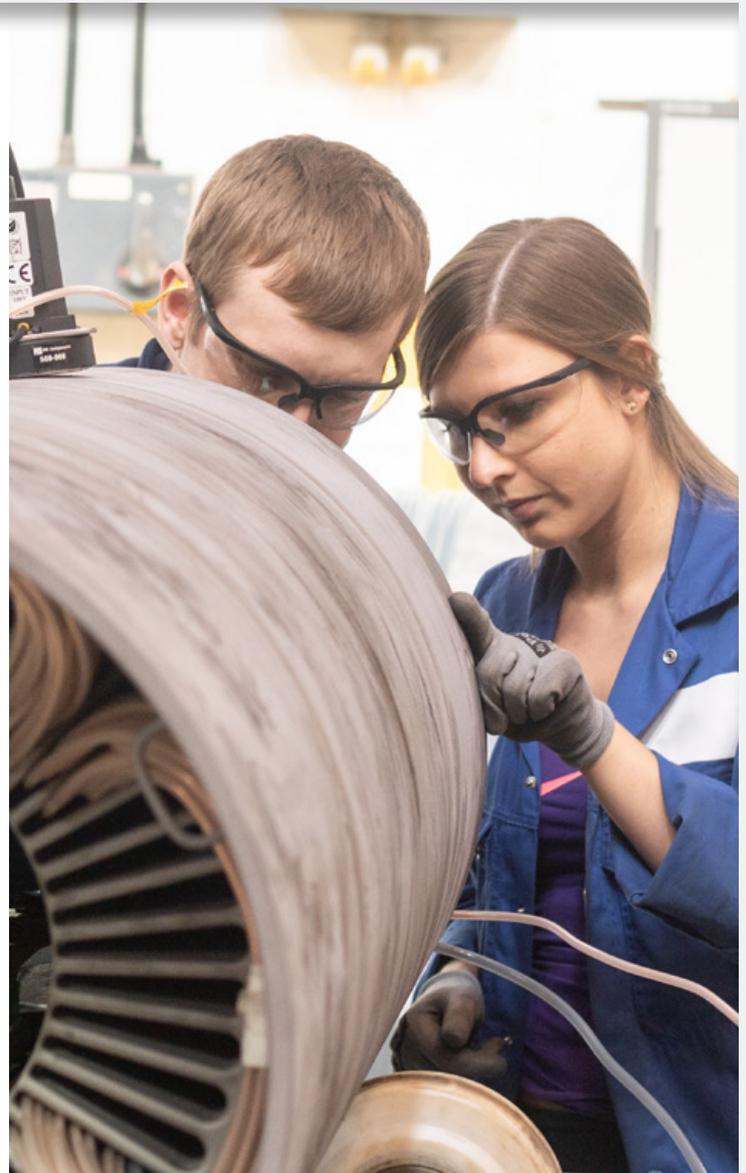
To ensure a sustainable future, you should confirm if your service centre splits the equipment into its component parts for recycling, and not sell it onto the second-hand market.

Do you follow best-practice guidelines?

Service centres should use the best practices outlined in the international 60034-23 standard to ensure efficiency is maintained.

What quality system do you have in place?

Your service centre should have a suitable quality system in place, such as ISO 9001 to ensure your project is managed properly.





Any materials removed during repair, such as old windings and bearings must be recycled minimising the net increase in material consumption.

A new standard of repair for motors...

Sustainability can officially play a part in the remanufacture of rotating equipment. Karl Metcalfe of the AEMT (Association of Electrical and Mechanical Trades) outlines the potential impact and benefits of the international repair, overhaul and reclamation of rotating equipment standard IEC 60034-23:2019.



Karl Metcalfe
(The AEMT)

Until now environmental considerations for rotating equipment have mainly focussed on new equipment and energy efficiency; however, the full lifecycle of an existing device, including material consumption is now being considered. The new international standard IEC 60034-23 which was published in Spring 2019, is the first to include the requirements of the circular economy, which aims to reduce the consumption of resources.

Setting the standard for sustainability The new standard establishes the benchmarks for repairing rotating equipment, maintaining efficiency levels, high standards of quality control and improving efficiency in associated pieces of equipment. The standard does not

supersede those pertaining to specialist equipment, such as ATEX, nuclear, aviation, hydrogen cooled and traction, but it does include reference to them and several other standards.

By complying with the new standard, maintenance and repair facilities can prove their quality of workmanship and performance, as well as promoting their commitment to reducing waste and recycling resources. By following the international guidelines, the repaired equipment can be badged with an indicative sustainability statement. The long-term aim of the standard is to maintain or improve the efficiency of equipment. It will allow upgrades to be implemented, if they are allowed by the original equipment manufacturer

(OEM). This means that a repairer needs to be well equipped, with good quality control procedures and staffed by suitably qualified employees capable of delivering high quality repairs.

The circular economy

This brings us back to the circular economy, which aims to minimise waste through reusing, repairing, refurbishing and recycling existing materials and products. The repair of electrical machines fits-in exactly to this concept and by keeping equipment operational and energy efficient, we are minimising the use of additional resources.

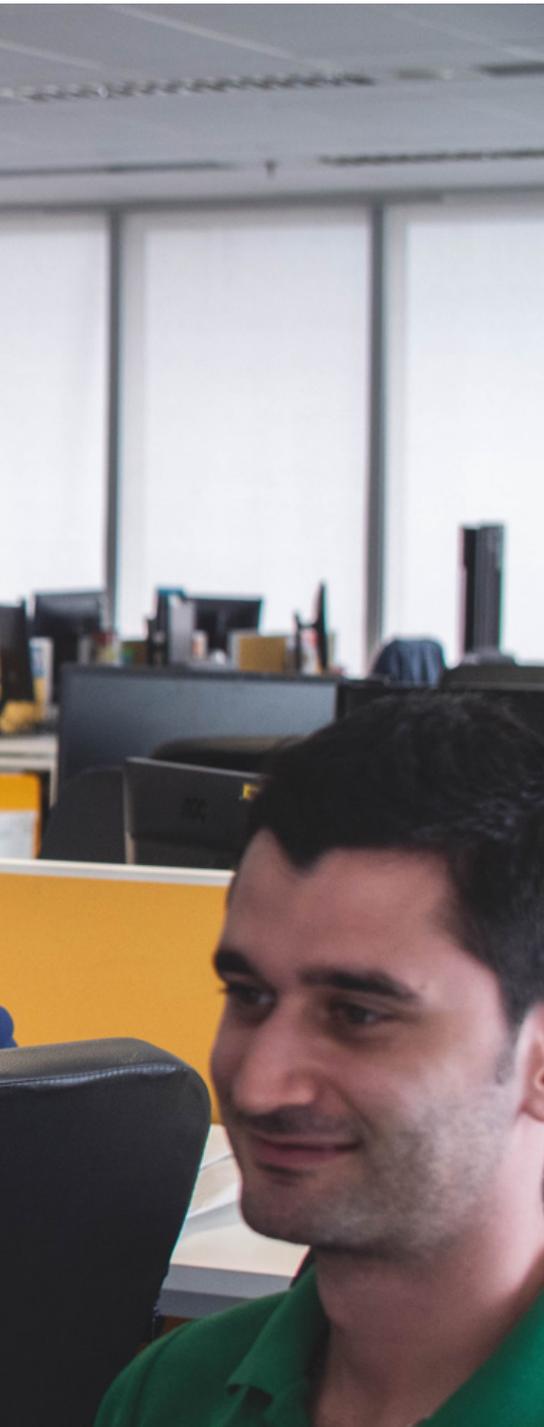
For some larger - older machines, it may be possible to upgrade their efficiency at the same time as completing a repair. Using modern materials in the rewind and upgrading to a higher-grade insulation e.g. grade B to F, which is much thinner than the legacy component, the copper content of the windings can be increased, making it more efficient by reducing the electrical losses and extending the longevity of the motor.

At the same time, any materials that are removed during the repair process, such as old windings and bearings, can also be recycled, which again minimises the net increase in material consumption. Not every motor, drive or gearbox can be economically repaired, and new units do offer increasingly high efficiency levels alongside advanced control and monitoring options. Best practice for an accurate efficiency and sustainability analysis however should consider both the repair and the replacement options, which is where the new standard will help to provide a balance of information in order to make the best environmental decision. ■



What's New in UK Employment Law for 2020?

New cases and developments constantly shape the world of employment law, which can make it difficult for employers to keep up. Croner, our trusted HR and employment law partner, outline the key cases and main changes to have recently taken place for businesses to note. For any further information or advice on these matters, call our dedicated member advice line on **0844 561 8133**.



New Laws Crack Down on Misuse of Non-Disclosure Agreements

Non-disclosure agreements (NDAs), or 'gagging clauses', have been under intense scrutiny on account of stories that they are used to cover up workplace abuse. In response, the government has promised new legislation to tackle the misuse of NDAs, which includes:

- Employers using NDAs will need to explain the limitations of any

agreement to their staff in 'plain written English' to ensure they have a full understanding of what they are signing.

- Those signing NDAs will be able to receive further independent legal advice on their rights, including the ability to disclose information to the police, regulated health and care professionals, or legal professionals.
- New enforcement measures will also be introduced to deal with employers whose NDAs do not comply with amended legislation, which could result in them being held to be void.

Consultation on Increasing Family Friendly Entitlements

"Neo-natal leave" could be made available to parents whose newborn child requires an extended stay in hospital. Suggestions contained in a new consultation also include extending offerings of family friendly leave and improving the transparency around relevant policies. Amongst a number of suggestions, the government has proposed that extra weeks of "neo-natal" leave should be added on at the end of employees' maternity or paternity leave to compensate for the time they spent in hospital, meaning a greater overall length of absence from work.

Millions More Workers Could Qualify for Sick Pay Under New Proposals

Two million low-paid workers could receive statutory sick pay (SSP) in the future under the government's proposals. What could this mean for employers?

- The payment of SSP is subject to various qualifying criteria, including minimum average earnings of £118 per week. The government has proposed extending payment of SSP to those earning less than this amount.
- This is likely to create additional costs for employers, especially those with large number of part-time employees. However, a sick pay rebate has been proposed to help smaller employers with the cost.
- The consultation seeks views on adjusting the rate of SSP to avoid a situation where low-paid employees could potentially earn more money when off sick than when they are in work.
- Additional statutory guidance has also

been proposed to help employers encourage staff to return to work as soon as possible, and employees may also be given the right to request specific changes to their role on health grounds.

Yearly Tribunal Stats Show 27% Increase in Single Claims

The latest employment tribunal (ET) statistics have been revealed, covering the period from January– March 2019, which means we now have a full picture of the key trends for the financial year (April– March 2018/19). This illustrates:

- 9,505 single claims were received between January-March 2019 which is a 6% increase on the same quarter in 2018.
- Working time (9,822), unfair dismissal (4,768) and disability discrimination (1,688) were once again popular claims during this quarter.
- Over 120,000 claims were lodged throughout the financial year 2018/2019 as a whole, with 35,429 of these being single claims.
- This is a 27% increase in the number of single claims when compared to the previous financial year and is the equivalent of 97 single claims per day.
- The most popular claims for the financial year were unauthorised deduction of wages (22,151), equal pay (26,860) and working time (49,199).
- 9% of all claims were successful at an ET during this time, which is a significant number for employers to consider.
- It is once again crucial that employers understand their legal obligations at work as the removal of fees, coupled with an increased awareness of employment rights amongst workers, continues to influence tribunal activity.

Change to Early May Bank Holiday in 2020

Next year's Early May Bank Holiday is expected to be moved from the first Monday in May to Friday 8th May across all areas of the UK in honour of the 75th anniversary of VE Day. Wondering if your employees are affected by the change?

- Time off on Bank Holidays is usually covered as part of an employee's contractual arrangements and set out in their statement of main terms (SMT).
- Employees may assume that they will be entitled to a day off on Friday 8th May 2020; but there is no automatic

entitlement for employees to have a Bank Holiday off.

- Employers will have to review the content of the SMT to identify their contractual position on giving employees time off on the moved Bank Holiday.
- Entitlement to Bank Holidays can be expressed in many different ways and the exact wording of the SMT will need to be analysed to determine whether employees have a contractual right to take the Friday off or not.
- Employers are encouraged to plan ahead of time and work out a solution that suits their specific business needs, making sure this is communicated to the workforce as early as possible to prevent any confusion.

Factoring Voluntary Overtime into Holiday Pay

The Court of Appeal have recently ruled on the case of East of England Ambulance Trust v Flowers which questioned when voluntary overtime should be included in workers' holiday pay. Join us as we take a look at the ruling below:

- The employees worked as part of the ambulance service and argued that payment for voluntary overtime - which they could choose to do or not as they pleased - should have been factored into their holiday pay.
- The Court of Appeal agreed, stating that voluntary overtime should be factored into holiday pay when it is 'sufficiently regular and settled'.
- This decision is binding and represents the highest Court decision on this topic. It will be key in any future disputes on voluntary overtime and holiday pay.
- There was no further guidance on how to determine if work was 'sufficiently regular' or 'settled', meaning employers will have to look at the facts of each case when determining holiday pay.
- Employers should remember that this decision only applies to the first 4 weeks of annual leave in the leave year.
- The decision could still be appealed to the Supreme Court, so employers may wish to factor this in when considering their position.

6th April 2020: The Good Work Plan

The Good Work Plan comes into force on the sixth of April in 2020, and has

been dubbed the "biggest overhaul of employment law in 20 years." The plan has come about as a result of the independent review conducted by Matthew Taylor.

Although some elements of the plan are still pending further clarity, Croner – our

trusted HR partner – explain the areas that businesses can begin to prepare for now.

For further advice on The Good Work Plan or wider HR matters, call our dedicated member support helpline on 0844 561 8133. ■



1. From April 2020, all workers will be entitled to receive a document that sets out all of the key terms of their contract. This document must be given from day one of their contract. Currently employers only need to provide key terms of employee's contract within two months. You should liaise with HR to be ready to implement this change – be mindful of any additional administrative burdens this could place upon them.
2. All workers have the right to request a 'more stable' contract. Workers will have this right after 26 week's service. You should be prepared to introduce a system for processing these requests, which can be similar to how flexible working requests are currently handled. Remember that whilst you can refuse this, you will need to provide sound business reasons for doing so. Also, like flexible working, it looks like there will be a three-month timeframe with which to deal with the request.
3. The break in continuous service will increase. Currently, a gap of just one week can break an individual's continuity of service. This can restrict their access to key rights of employment, and can occur despite the employee working regularly on and off for the same employer. Therefore, as of April 2020, the gap will increase to four weeks, making it easier for those employees who work sporadically to qualify for more employment rights. You should review current processes and liaise with HR and payroll to ensure they are aware of this and are not

unlawfully denying rights to workers. Also re-evaluate current processes in light of this to avoid falling into traps – you may end up having to provide rights and entitlements when you don't intend to because of previous allowances when taking on casual workers.

4. A big change for those working in the hospitality and catering industry is that employers will be banned from taking "administrative fees" from tips and gratuities—they will pass directly to the individual, rather than be taken by the employer. Organisations are advised to carry out a review of their current tipping practices, ensuring they understand the process in place and whether deductions are being made from tips. Any documentation in place on this practice can also be reviewed. This will ensure the organisation is in a good position to implement the new restrictions placed upon them by the legislation once these are introduced.
5. There will also be further protections for agency workers. They will have the right to be provided with Key Facts pertaining to the type of contract they are accepting, as well as their rate of pay, who is responsible for paying it, and any deductions or fees that might be taken. You should liaise with HR to be ready to implement this change.

The Good Work Plan will have a significant impact on business operations soon. Contact our specialist advice line on 0844 561 8133 to find out more.



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The turbine rotor was also balanced before being reassembled.

On-site overhaul of 55 MW geothermal steam turbine

Sulzer's mobile repair equipment reduces downtime to just 45 days

Geothermal sites are often located in areas that are difficult to access. In this case, a power station in Indonesia in a mountainous area 780 meters above sea level with narrow access roads needed a steam turbine overhauled. Sulzer was chosen to overhaul the 55 MW steam turbine-generator as a result of its expertise, experience and ability to minimize the project duration by sending its mobile repair equipment to the power station.

Routine maintenance is essential for all pieces of rotating equipment, but steam turbines are far from small, making them difficult to transport to a workshop for repairs – especially geothermal steam turbines. To improve the repair process, Sulzer in Indonesia has developed a range

of mobile repair machinery that, together with expert engineers, is fully equipped to refurbish steam turbines on-site.

Planning ahead

With the world's largest reserves of geothermal energy, Indonesia is hoping to increase its use of this renewable energy source. At the same time, the power stations that are already in operation need to maintain their reliability with planned maintenance routines.

Kusno Baryadi, Field Engineer for Sulzer in Indonesia, comments: "Geothermal steam turbines operate in a particularly challenging environment, where chemical erosion can have a detrimental effect on their performance. In order to ensure

their continued reliability and efficiency, steam turbines should be overhauled every four to five years."

Sending the steam turbine rotor to the workshop was quite risky due to the power plant's remote location and unsuitable roads, it was therefore decided to perform the overhaul and repair on site. This would also achieve a considerable saving in downtime for the steam turbine, which minimizes costs associated with the refurbishment project.

Mobile expertise

Effective planning is essential to complete such a project on time. For the power station, the 45-day maintenance

window was established, and Sulzer was expected to meet the deadline. Before the generator was taken offline, Sulzer engineers worked with staff at the power plant to organize the most effective method of completing the work.

Sulzer in Indonesia has developed mobile repair equipment that consists of a complete set of portable tools including lathes, balancing machines and welding equipment that can be mobilized efficiently. This reduces transportation costs for the customer as well as potential rotor damage risk, which means insurance costs are also minimized.

All the necessary spare parts were assembled along with the mobile machine tools and balancing equipment, all of which was packed into four trucks for transport to the power station. As soon as the trucks arrived the lathe and the balancing machine were set up, while the rest of the team started to disassemble the upper casing of the turbine.

Detailed inspection

Once the rotor was removed from the casing it was set up on the lathe, where the dimensional inspection, runout checks and non-destructive testing could be performed. Part of this inspection showed that the L-0 and L-1 blades would need to have their erosion shields replaced, which

would be possible as their design allows them to be brazed into position.

Erosion shields are typically attached on the leading edges of steam turbine blades in the final rows of the low-pressure section that protect the airfoils from erosion. They reduce wear on the blades caused by cavitation erosion from condensed water particles in the steam. For repairs where only the original erosion shield has been worn and not the blade material, the first step is to remove what remains of the erosion shields that are typically made from cobalt base material. Having sand-blasted and cleaned the blade recess, a replacement can be installed using a special jig and heating elements. The specific pressure and temperature applied during the installation process is determined by the bonding material in use.

Perfect balance

The inspection also revealed that the labyrinth seal strips needed replacing on one turbine-side stage and four generator-side stages. All of these seals and the erosion shields underwent further NDT procedures to ensure that all replacement parts conformed with required specifications.

With all the repairs complete, the final low-speed balancing of the rotor was performed and the turbine reassembled,



The detailed inspection revealed some of the erosion shields would need to be replaced.

before being recommissioned and put back into service. The temperature and vibration sensors all indicated values within the specifications recommended by the original equipment manufacturer (OEM).

Kusno concludes: "The overhaul was completed within the 45-day maintenance window organized by the power plant resulting in no unplanned losses. The customer was very satisfied with the results and equally impressed with the mobile repair equipment that made it all possible." ■



Preparing the turbine rotor for balancing



UK coatings firm selects ABB Ability™ Condition Monitoring to help reach zero downtime goal

Transcontinental Advanced Coatings extends successful pilot of ABB's smart sensor monitoring and predictive maintenance solution as it aims for zero downtime.

Industrial coatings producer Transcontinental Advanced Coatings has successfully piloted ABB Ability™ Condition Monitoring on critical equipment at its UK facility. The manufacturer used the pilot project to enhance the existing predictive maintenance regime on a critical oxidizer process that cleans the air before it's released to the atmosphere.

ABB Ability™ Smart Sensors – fitted to the motors and mounted bearings that operate on the oxidizer's two fans – collect and analyze data to monitor performance. The system alarms if pre-defined limits for parameters such as temperature and vibration are exceeded.

This enables preventive maintenance to be carried out before problems occur.

Transcontinental Advanced Coatings – based in Wrexham, North Wales, UK, and Matthews, North Carolina, United States – makes precision coated papers, films and specialty substrates for digital imaging, electronics, medical and optical technologies. Based on the success of the pilot project, the company will extend the remote condition monitoring solution to an entire production line in its Wrexham facility.

“Our overall goal is zero downtime. ABB Ability™ Condition Monitoring ensures we can identify equipment issues early on

– before they happen – and take action to prevent breakdowns from occurring,” says Dr. Keith Vidamour, Engineering Manager for the Transcontinental Advanced Coatings North Wales plant. “Conducting maintenance as needed rather than on a fixed schedule will help us improve reliability and process control.”

Previously, the company relied on monthly manual monitoring of the fans' motors and bearings using thermal imaging, oil sampling, and vibration analysis. These tests were only a snapshot of the condition of the process rather than a continuous real-time picture. The results also relied on an individual engineer's interpretation.

“We are keen to move to a more objective, more data-based condition monitoring regime,” says Dr. Vidamour. “We are now monitoring additional parameters and have access to far more objective information than ever.”

The second phase of the project will use multiple smart sensors to remotely monitor the motors and bearings throughout a process, together with up to four Bluetooth gateways connecting with ABB's secure server. Ultimately, the company will roll out the solution across its global platform.

“Transcontinental Advanced Coatings wanted to prove that the condition of critical machinery could be remotely monitored,” says Derek Robinson, ABB's Key Account Manager for High- and Low-Voltage Motors. “The successful trial proved they could significantly improve overall maintenance efficiency. The company's decision to continue to add additional ABB Ability™ Smart Sensor technology will give it a real competitive edge.” ■



UK's largest stockholder of electric motors emphasises the importance of trade bodies to the market

As an active member of the Association of Electrical and Mechanical Trades (AEMT), TEC Electric Motors, holder of the UK's largest stock of electric motors, is underlining the importance of standards when it comes to the replacement of rotating equipment.

“TEC has been a member of the AEMT (Association of Electrical and Mechanical Trades) since 2012 - we see the AEMT as the go-to authority for industry standards on the repair and rewinding of electrical rotating equipment,” says TEC Electric Motors’ Business Development Manager David Ede. “Members are fully invested in the latest standards that define best practice in electrical and mechanical servicing.”

Notably: 60034-23, the repair, overhaul and reclamation of rotating electrical machinery, and 60034-1, Rating and performance of rotating electrical machines.

“End users rely on them for comprehensive support, so when a rewind is not a suitable solution MRO suppliers need to be able to access the right replacement in a realistic timescale, and that’s where we come in. TEC also uses the AEMT Ex Training services to ensure we have trained certified staff to support our ATEX Hazardous area motors.”

“Many of our UK distribution partners are also members of the AEMT,” says Ede. “Customers expect a consistent level of support for products in the field, provided not just by us but also via the distribution network. We’re not just working with our partners to provide the best

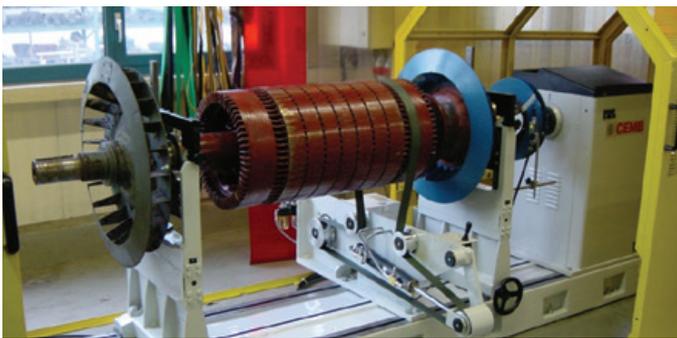
possible service to meet today’s industry requirements, we’re also planning for tomorrow.”

With a fast-growing customer base built on providing quality products with a customer experience to match, TEC carries a wide range of electric motors, gearboxes and inverters, offering the largest motor stock in the UK. Three strategically placed branches for quick dispatch means TEC can react immediately to urgent requirements across the UK. This, combined with a range of motor test and modification services, makes TEC the one-stop-shop for many AEMT members’ power transmission needs. ■

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Compressors are utilised in the production process to carbonate beverages with this gas, performing a vital role in the plant.

Rotamec rewind service helps a leading brewery to keep its fizz

Ensuring redundancy in large scale manufacturing operations is key to any plant manager's peace of mind. In the beverage industry, where processing speeds are high and profit margins per unit low, securing redundancy is especially important towards promoting uptime.

One world famous brewery has turned to Rotamec, an electro-mechanical service provider to industry, who secured its production line by carrying out a specialist motor rewind and refurbishment within seven weeks.

CO₂ is what makes drinks fizzy, and is all important in providing a desirable 'head' on a glass of beer. Compressors are utilised in the production process to carbonate beverages with this gas, performing a vital role in the plant. Without a running back up compressor to step in seamlessly during issues with the primary compressor, production uptime is at greater risk.

So, when a leading brewery found that the 500kW motor powering its on-site compressor back up had failed, the business required an urgent motor repair and refurbishment to minimise the

chances of downtime. With reference to pre-existing maintenance schedules, while balancing adequate time for a quality repair with ensuring manufacturing security, a timeframe of seven weeks was settled on by the brewery.

After contacting several motor specialists that could not fulfil the project requirements, Rotamec was selected. The business was not only able to service the motor within the seven week timeframe, but also provide a cost advantage.

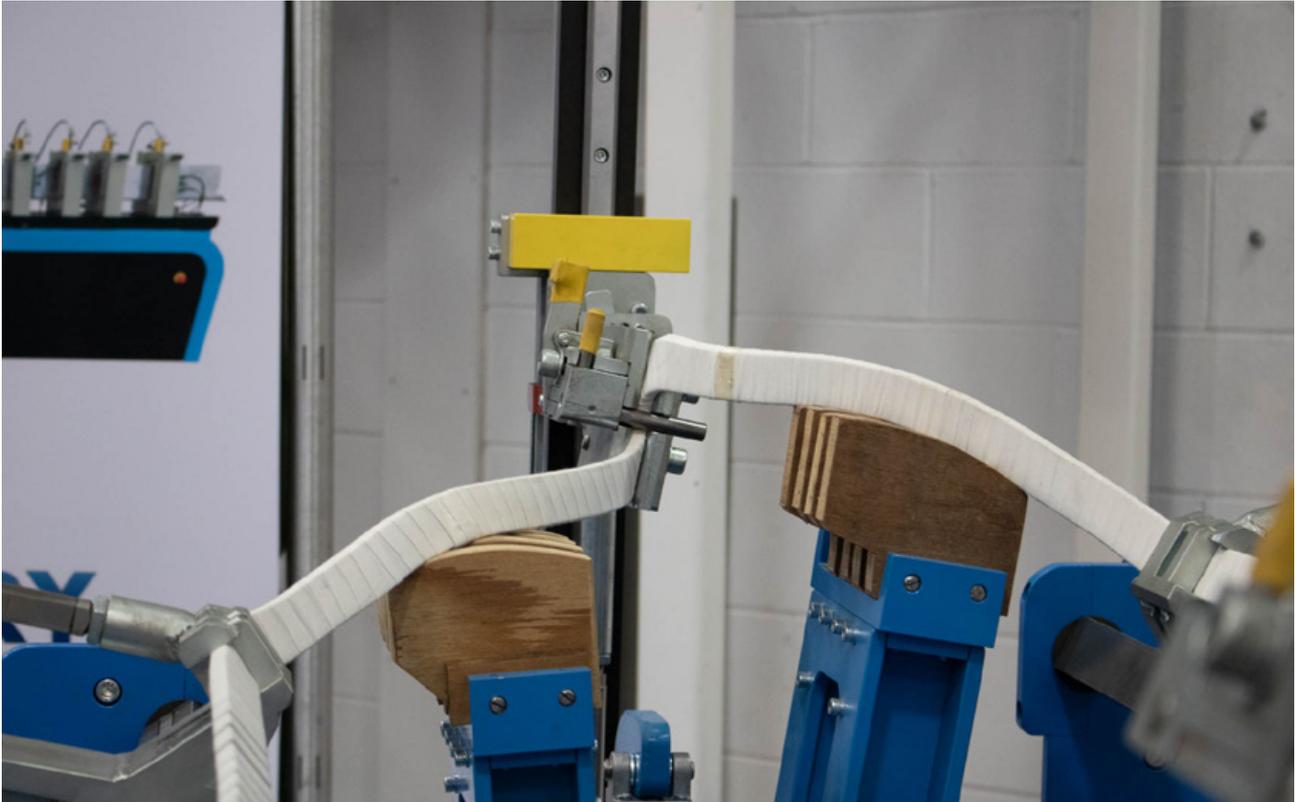
Rotamec has been providing high quality motor rewinds and repairs to industry since 2000, operating state-of-the-art workshop facilities in Cheddar, South Wales and Exeter to ensure a responsive UK service. In fact, the business operates 24/7, 365 days a year to support the needs of its customers. Engineers undertake in-house training provided

by leading motor manufacturers, so can quickly familiarise with customers' motors for a speedier repair.

Alan Brooks, Branch Manager for Cheddar at Rotamec, remembers the project well: "In terms of this customer, we were required to rewind the motor and carry out a general overhaul. The challenge was that the motor featured pre-formed coils, which are not the most common type. We therefore had to source these coils quickly before we could begin the rewind. Luckily, we have a wide-ranging capability with regards to specialist motors, which meant we could solve the issue. Ultimately, we were able to return the now refurbished motor within the seven-week deadline, which was a challenge that our breadth of expertise ensured we could meet."

Once the motor was re-installed, the beverage manufacturer again had access to a compressor redundancy. As a result, production uptime was effectively safeguarded to ensure productivity and profitability. Backed by the highly responsive 24/7 Rotamec service, the manufacturer also has access to the support required for continued high speed, large scale manufacturing in the long term.

Alan concludes: "I am very proud that the team could conduct this specialist motor rewind to schedule, despite the challenging coils. Not every supplier can achieve this, but thanks to our capability with regards to motors of all types, it was a challenge we could meet effectively and efficiently." ■



Rotary Engineering simplifies high voltage coil radii forming for MRO service providers

High voltage coil manufacturing requires specialist machines, which are the specialty of AEMT member, Rotary Engineering. The business has a strong track record in providing coil spreaders for the manufacture of high voltage coils, but has pushed the concept further by including a radius forming capability into its latest model. The result is simplified and expedited coil manufacture – adding flexibility to an inherently challenging process.

Ensuring the correct radius at both ends of a high voltage coil is paramount in delivering a uniform electromagnetic field. Traditionally, forming a coil into a radius would require hammering with a soft mallet, which demands extremely skilled workers to complete the task accurately. In most businesses, there will only be a handful of expert engineers entrusted with this lengthy task – which is hardly ideal when trying to provide a short lead time. Hammering coils into shape also takes its toll on the workforce too, with repetitive strain injuries a very real risk.

Costly sophisticated CNC cold forming machines do offer an alternative with less hammering requirements. However, these are more suited to the needs of coil OEMs. Typically, an OEM will tailor designs to meet the limitations of its CNC machines, as pre-programming and machine capacity can only go so far. For repeatedly producing a small variance of coils to specific specifications, CNC machines make sense.

Optimised for the repair market

However, neither CNC machines or

manual hammering are ideal for MRO requirements. Manual hammering simply takes too long, especially when juxtaposed against the need to reduce downtime for the customer.

CNC machines also have limitations. While proficient at producing coils to a number of predetermined specifications, when it comes to producing exact replicas of coils that can vary wildly in specification for repair work, they are less so. For coil repair specialists, a more optimised solution is required.



"While traditionally only a few select workers would be entrusted to apply the radii to a coil, the Radius Forming Coil Spreader allows the task to be completed accurately with high repeatability – minimising hammering post processing."

Simon Swallow, Managing Director at Rotary Engineering, explains their approach to the problem: "We are in a state of constant development when it comes to our machines. In this case, we wanted to see if we could find a way to incorporate radii forming of coils into one

of our rotary coil spreaders. We wanted a machine that still reduced hammering to the bare minimum, but was also a more versatile and cost-effective option compared to a CNC machine."

The end result is the Radius Forming Coil

Spreader. A pneumatic machine that is loaded manually and controlled by a series of levers, the machine spreads the coil, lifts and twists it, before a final lever is activated to apply the required radius. All positions are formed to mechanical stops that are calibrated beforehand. The result is a coil that requires minimal hammering after it has been produced. While slower than a CNC machine, the entire forming process is complete in a matter of minutes.

Repeatability and flexibility

"The primary benefit of this machine is that it de-skills the coil forming process," Simon explains. "While traditionally only a few select workers would be entrusted to apply the radii to a coil, the Radius Forming Coil Spreader allows the task to be completed accurately with high repeatability – minimising hammering post processing. This provides our customers with increased flexibility in terms of replicating coils, as repair work is not bottle-necked into a few experienced skilled workers. Strain on the workforce is reduced, and lead times are subsequently improved.

"It takes exceptional skill to form a coil manually with a hammer, backed by years of experience. Training employees to this level is very difficult, but the Radius Forming Coil Spreader bridges this gap, allowing more people to utilise the machine and gain a similar result. In the past, this simply hasn't been an option. Combined with the extra versatility of coil replication compared to a CNC alternative, it's a machine we feel is well suited to the MRO market."

Rotary Engineering has a working prototype ready for demonstrations. With development complete, Rotary Engineering is now offering its customers the chance to specify the new Radius Forming Coil Spreader.

To learn more call +44 (0) 114 251 3134 or visit <http://www.rotary.co.uk/>. ■

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Michael Mitten, CEO of Houghton International, with this year's apprentice intakes

A visit to Houghton International reveals people are the secret to its success.

Thomas Marks, Secretary of AEMT, visits Houghton International in Newcastle-upon-Tyne. He speaks with Michael Mitten, the CEO, who is joined by Tiffany Scott, the Marketing and Business Development Director. They talk about the company's latest service offering, the vision for the future and how it will be achieved as well as Michael's personal goal to raise money for charities that have supported his family through difficult times.



Thomas Marks
(AEMT Secretary)

Driven by the company's core values, Houghton International has been expanding its business significantly over the last 5 years. Values such as protect and develop the workforce, deliver exceptional customer service, honesty, integrity and the use of innovation have proven to be the recipe for their success. So essential was it for the workforce to engage with the values, Tiffany organised for large boards emblazoned with the values to be erected all over Houghton International's sites – you will even find them in the restrooms!

2020 vision

Being a goal-orientated business, encouraging staff to meet the next set

of targets was important. Back in the summer of 2014, Michael introduced an ambitious 5-year plan with an aim to increase turnover to £20 million by 2020. Such an increase in growth would require considerable leadership and investment in both people and premises. As the business grew beyond the £5 million mark, a diverse leadership team would be required to manage the various facets of the business.

Key to the vision's success was the workforce. Assembling all 65 employees for a presentation, Michael kicked off the project by explaining the company vision, and a plan on how it would be achieved. At its core were the staff and their belief

in the quality and expertise within the business. The expansion plan would require this talent to be developed as well as bringing in new expertise.

Having recruited some key positions, the management team was brought together at a team building day to discuss vision 2020 and how to achieve it. By talking about the objectives, they had been tasked with, the team were able to set milestones and make sure they had the tools to deliver them.

Organic growth

The growth of the business has seen the addition of new premises including a large machine shop to handle electro-



The expansion into the rail sector has brought many advantages; not least new processes and testing facilities to ensure the best possible solutions, backed up by precision engineering.

mechanical repairs up to 30 MW. More recently they've moved into vacant space at Newcastle's CAP Works to expand their burgeoning pump business.

For the more complex or high value projects, customers often come to the workshops to look at progress and audit the completed work. These visits are welcomed and this open-door approach ensures that the high standards of workmanship and cleanliness are always maintained.

Growth was achieved organically within the marketplace based on high levels of customer satisfaction and a confidence in their ability to take on a greater share of the market. Expanding the service offering to current customers to include pump services has proven a successful driver for growth.

Critical to this growth was the ability to attract and retain the people to deliver the work. As such a key objective for Houghton International is to become an employer of choice, regionally, nationally and internationally. Houghton International has been recognised in

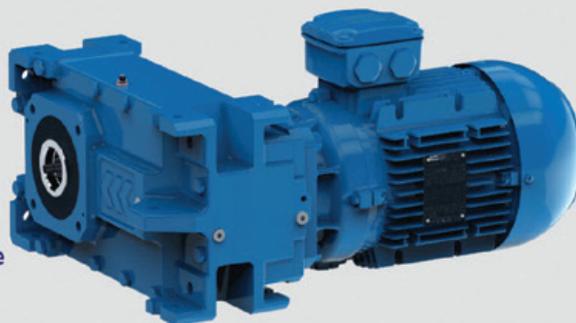


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the top 10 employers in the North East for 2 years running. As part of this strategy a 'Sharing Success' campaign was developed to improve benefits and remuneration for the staff. Houghton International now employ over 150 people in the North East region, up from 65 in 2014.

Expanding skills and expertise

Central to the 2020 goal, was investing in the talent and facilities required for delivery. Firstly, the overall workforce needed to increase while developing their skills. The best way of expanding such a workforce is to take on apprentices and trainees who can learn from experienced engineers.

Encouraging the apprentices, trainees and the existing workforce was rooted in the new Sharing Success bonus scheme. Designed to improve performance it has proven important for maintaining morale and achieving the company's goals.

Based on last year's figures, the company far exceeded its targets, meaning the



Houghton International has also invested in design and analysis tools for a comprehensive pump repair solutions. With so many new technologies and materials available, they can create improved pump designs to legacy equipment for better performance and efficiency.

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Of the total workforce, 20% is at one stage or another of their apprenticeship, with the business usually taking on eight new apprentices per year.

expected bonus was more than two and a half times the original figure.

The whole aim of the strategy is to include everyone and ensure they feel engaged and appreciated for their contribution. Part of the process is to ensure everyone understands the company values, the reasons for them and how to uphold them.

The integrity of the company is based entirely on that of its employees and Michael wanted to continue building the business with the same values that were established by his parents. This would include training new staff and expanding the knowledge and expertise of existing

employees. Essential for the continued growth of the company.

Supporting the workforce

One objective is to be recognised as an excellent employer, locally, nationally and internationally. As the company continues to grow, the overseas aspect will become more important. To gauge progress on this aspect of the expansion plan, an employee survey has been conducted each year to assess satisfaction within the workforce and to elicit suggestions for improvements. 82% of employees took part this year and of these, 97% stated that the company was a great place to work.

Interestingly, after one employee survey it became clear that although the workforce stood behind the company's values, they remained ambiguous. How do we live by these values, and what do they really mean?! A team meeting developed the third essential part of the 2020 vision – the principles to which the team works. From then on, each decision made is challenged by the company's values.

Of the total workforce, 20% is at one stage or another of their apprenticeship, with the business usually taking on eight new apprentices per year. They are encouraged to work in all areas of the company to give them a wide range of experiences. Multi-skilled staff provide



The growth of the business has seen the addition of new premises including a large machine shop to handle electro-mechanical repairs up to 30 MW.

a more flexible workforce. This allows Houghton International to transfer more resources to larger projects when required and ensure projects are completed with minimal downtime.

Gaining traction

The core business at Houghton International has centred on the repair and rewinding of electrical motors and generators. This business has grown to include traction motors, commutators, alternators, fan units and other auxiliary equipment. The expansion into the rail sector has brought many advantages; not least new processes and testing facilities to ensure the best possible solutions, backed up by precision engineering.

In the rail industry, it is difficult to become established as a recognised supplier. The strategy developed by Houghton International has aided the development of many contracts throughout the industry.

Today, the rail division is recognised by the Railway Industry Supplier Approval Scheme (RISAS). In particular, the company's unique HiTRANS patented transient dynamic test process has received praise. Designed to simulate full load conditions for motor alternator (MA) sets, it ensures that assets returned to customers will run without any issues when reinstalled.

Expanding into pumps

More recently, the company has diversified further into larger and more complex pumps. Enabled by acquiring considerable pump expertise within the management and workforce. The potential within this market is huge, not only with existing customers, who already appreciate the value Houghton International can deliver, but also with new clients.

Houghton International has also invested in all the design and reverse engineering tools, including a 3D scanner, necessary for comprehensive pump repair solutions. With so many new technologies and materials available, they can create improved pump designs to legacy equipment for better performance and efficiency.

Modern reverse engineering capabilities create new components that have been designed using the latest 3D CAD and analysis tools to model flows. The result is improved reliability and efficiency, which helps to reduce power consumption and running costs.

The Houghton International ethos to improve the performance of existing assets, reduce expenditure and add value for the customer, has transferred successfully to the new pump division. In just the second year of working on pumps, this division will turn over £1.5 million, endorsing the approach that is still being used to support company growth.

Improving sustainability

Today, sustainability is a very important issue and the repair and refurbishment of assets is vital to reducing industry's carbon footprint. Reusing as many components as possible helps to reduce waste while improving reliability and performance at the same time.

In Michael's view, the whole industry, with the help of the AEMT, needs to do more to encourage the circular economy and promote the reuse and repair of assets.

AEMT membership

The introduction of any new concept or technology requires pressure in the early stages to encourage their adoption. This process is helped by organisations, such as



The HV coil shop is another important facet to Houghton International which has helped diversify and develop the business overseas.

the AEMT, who promote the advantages and discuss the challenges. Industry 4.0 is a good example where technology has reached such a point that it is able to deliver benefits to industry as a whole, but the number of individuals actually investing in it was small in the initial years. As the advantages become more well-known, so more and more people take the plunge. Eventually, you reach a point where those who have yet to adopt the new technology are in the minority but also losing ground to those who already made the decision to invest and streamline their processes.

As an AEMT member, Houghton International maintains its connections with its industry peers. The Journal offers a great communication channel while events, such as the awards evening, play an important role in recognising those members that have made significant contributions to the industry and those working in it.

The AEMT also offers support to members in gaining new accreditations and training in specialist disciplines such as hazardous areas. The association has considerable influence on industry standards where members can have their views represented. By bringing together such a large collection of expertise and industry experience, the association offers considerable advantages to suppliers and customers alike.

Moving forward

As we head into 2020, the next five-year plan is being drawn up. Consolidating the existing organisation and aiming to always

improve the quality of service delivered to customers are the primary aims. Keeping sight of the company's core values and principles while working with integrity and transparency ensures every employee will be working towards the next set of goals. In terms of the marketplace, the potential for expansion remains high. The number of electric vehicles is increasing as the world is starting to see the benefits of them. The next step will be to establish who repairs these electric motors to the required standards. The most obvious choice would be a company that has decades of experience in the field of electric motor maintenance.

By continuing to deliver the advantages of sustainability through repair and remanufacturing, Houghton International will help every customer to reduce operational costs while minimising the consumption of resources. ■



Poles apart:

Following the passing of his father, Ron Mitten, Michael decided to celebrate his father's life in a positive way and raise £40,000 for Macmillan cancer support to thank them for all their help in the final months of his father's life. In 2009 he challenged himself to trek to the North Pole.

Having been introduced to a polar expert, Michael needed to get in the best shape of his life if he was to successfully complete the expedition. The 'True North' challenge involved an intensive training programme that would prepare him for the trek to the Geographic North Pole. Having completed the adventure, Michael described the journey as, "the toughest

challenge of my life. It was also the most rewarding, enriching and profoundly surreal experience I guess I'll ever have to enjoy."

Like many adventurers to the poles, Michael was eager for another taste, and yearned to take on the South Pole. This time in support of the Multiple Sclerosis (MS) Society, which did so much to help his mother, Christine Mitten, before she passed away in 2016.

On December 4th, Michael set out on his epic adventure to the South Pole across 111 kilometres of frozen tundra, while pulling a sled with all the supplies required for the 10-day journey. Having endured two years of specialist intensive training, Michael will be faced with

temperatures ranging from -25°C to -50°C (-12°F to -58°F) and altitudes ranging between 3,000 and 3,500 metres (10,000 – 11,500 feet).

Michael's aim is to raise £50,000 for the MS Society, which will be used to fund research towards a cure and providing support for those affected by the illness. At the same time, he wants to raise awareness about how his mother battled the illness to prolong her life. 15 years on from her initial diagnosis, Christine's MS was declared benign. She took up walking and dedicated herself to fundraising for the Sunderland branch of the MS Society, which had done so much to help her. One of her final achievements was to climb Machu Picchu, only a few weeks before she passed away.

Michael wants to continue his mother's legacy, inspiring more people to help those affected by MS, and by raising funds for research and telling the story of Christine's life after diagnosis.

To support Michael, learn more about the expedition and donate towards the cause, please visit polesapart2019.com

Members' meeting at Amazon Rugeley Fulfilment Centre



1. Group photo overlooking Amazon's distribution centre
2. Alex Page of Mid Kent Electrical
3. Lara Parekh-Downes of Solutions in IT
4. Chiara Civardi of DMA Europa



5. Group photo outside Amazon Visitors Centre
6. Members enjoying speed networking at the start of the day
7. Jon Rowe of Fletcher Moorland
8. Danny Fox of Preformed Windings
9. Members enjoying speed networking at the start of the day



Image credit: Quartzelec

Take the crisis out of an **Emergency**

AEMT members are highly skilled Electrical and Mechanical Engineers often prepared to work round the clock to collect, repair and return faulty equipment, and keep downtime to a minimum. Most supply, service, and rewind electric motors, and look at the most economical and energy efficient solution.

The majority also repair pumps with some operating in confined spaces to remove and refit centrifugal and submersible pumps. Many also service gear boxes. AEMT members work to prevent problems and are probably the largest network nationally and internationally of companies able to carry out thermography, vibration analysis, and laser alignment. Their mechanical ability to rebuild and refurbish items is legendary. Many AEMT companies are trained to repair and work in Hazardous Areas, and most offer the quality expected with ISO9001.

So when you require help quickly at 1 am in the morning, or 5 pm on a Sunday afternoon, help is at hand! Whether you are in the UK or in Miri in Borneo, just look up the AEMT Website for a list of companies that are able to help you.

Remember: www.theaemt.com



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Total Engineering Commitment



AEMT Conference Welcome Address

By Thomas Marks, AEMT Secretary

Ask anyone about employing engineers in the UK, and you may get the same answer. Engineers are hard to find in this country. For our sector in particular, we find ourselves competing with wealthy blue-chip companies, who can lure the cream of the crop with persuasive employee packages, and gleaming workshop floors! I believe AEMT members have a string to their bow that these companies are missing.



Thomas Marks, AEMT Secretary

A study of the UK population found that almost half the workforce now wants to work for an organisation that has a positive impact on the world, and that desire is growing strongly. In just 5 years 75% of the workforce will be Millennials, and the apprentices you are already recruiting are from Generation Z. Essentially, the workforce will, on the whole, be those born after 1980. It's very evident from the news that these generations care a great deal about sustainability and the future world they stand to inherit.

If your service centre already works with customers to increase the efficiency of their drive systems; or if you repair machines to the AEMT's codes of practise or to the new repair standard, rather than replacing it like for like with a new one, then you are making a positive impact on the world.

When you recruit, is this message loud and clear in your job description and

interview process? Do your apprentices truly understand the effect their work has for the public, the environment and their future? Do your customers know that if they actively manage and plan for climate change they could secure an 18% higher return on investment than companies that don't? (According to a study of American S&P 500 companies.)

So, what will help us manage and plan for a sustainable future? The answer is digital technologies.

These generations have grown up with the internet, mobile phones and computers. They know the technology intimately and understand how it can benefit our future. They are interested in companies who embrace this technology.

Born after 1996, Generation Z are described as independent, ambitious, and self-learning. They are resourceful and used to finding answers to most of their questions online. As an association we

are looking at how we can take advantage of this with online training tools to make remote learning possible.

For service centres, apprentices will want access to tablets or laptops for educational purposes and for managing their jobs. Updating your systems and process, such as installing an enterprise resource planner, or by using affordable web apps such as Hubspot or Salesforce will show that you are a forward-looking company.

Most importantly, diversifying into digital areas where traditional rewind shops haven't usually been could be important for the prosperity of all service centres.

For photos of the conference please visit: <https://www.aemtconference.com/2019-photos>

For conference presentations, please use the password 'aemtconf' at: <https://www.aemtconference.com/presentations-2019> ■



1. David Hawley, President of the AEMT, Opens the 2019 Conference.
2. Shaun Sutton, Vice-President of the AEMT, facilitates a speed networking session at the start of the conference.
3. Peter Isberg of ABB, looks at motor driven systems, the circular economy and how improving efficiencies are lowering industry's carbon footprint.
4. David Ede at the TEC Motors stand
5. Roland Renshaw from DMA Europa, the AEMT's marketing and PR partner, demonstrates Virtual Exhibitions - an innovative new advancement, which is already proving to be a huge success. It lowers the carbon footprint of tradeshows, while at the same time massively increasing footfall. The AEMT are one of the pioneers taking advantage of the service.







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- 6. Visitors networking in front of the Whitelegg stand during a break.
- 7. David Donoghue with visitors at the Drummotors and More stand.
- 8. Andy Patten and Christopher Carrick of ADC Electrical with Mike Herring at the Megger Instruments stand
- 9. The AEMT's Karl Metcalfe runs a workshop to develop an understanding of the new international repair standard IEC 60034-23, and how to promote it.
- 10. Martin Johnson at the Micro Clutch Developments stand with Honorary Member, Jennie Gordon
- 11. Gary Downes of EMIR Software in the afternoon's panel discussion.
- 12. Matt Philips of SimPRO looks at the benefits of using a digital enterprise resource planner to increase your customers energy efficiency, allowing them to operate more sustainably and competitively.
- 13. A break out session with Mark Reynolds of ProfitReach looks at how to generate a consistent stream of B2B website leads in 2020.
- 14. Concluding the day, a panel discussion with (L-R) Matt Fletcher of Fletcher Moorland, Shaun Sutton of Central Group, Gary Downes of EMIR Software and Peter Isberg of ABB, share their experiences with embracing digital technologies, the practical problems and solutions they faced, and how to be prepared for the future.
- 15. Ivar Lycke of Electrom Instruments, and in partnership with WES, raises awareness of a new technology, which allows the testing of partial discharge in low voltage machines.



Winners and Finalists of the 2019 AEMT Awards

2019 AEMT Awards Winners Announced

The Winners of the 2019 AEMT Awards were announced during a Gala Presentation Ceremony in Coventry on Thursday 21st November. Attended by some 200 people from across the electrical and mechanical trades arena, the evening once again proved to be a wonderful evening of reward and celebration. In just its third outing, having only been launched in 2017, this year's awards programme again attracted some truly excellent entries across the seven categories, all of which were deemed by the independent judging panel to be of the highest quality.

The Judging Session was held at Loughborough University back in October, during which comprehensive assessment protocols and a supporting 'points scoring system' were employed to determine the Finalists in each category.

This process also identified the category Winners, although this information was kept under wraps until being revealed by the category sponsors during the charged atmosphere of the Gala Awards Ceremony.

Commenting on the awards dinner, Thomas Marks, Secretary of the AEMT said, "We were delighted with the entire event from start to finish. The venue, food and drink were all excellent, the stage set and overall presentation was fantastic, but for me, just seeing so many people from across our sector coming together to recognise and celebrate the excellent work which it collectively carries out every day, is simply wonderful. Sincere congratulations go to each of the Finalists and of course to the eventual Winners."

Further details

For more information on the 2019 AEMT Awards and to review the image gallery, please visit the dedicated awards website www.aemtawards.com or contact the producers, Touchwave Media on 07785 290034 or by email at andrew@touchwavemedia.co.uk. ■

The 2019 AEMT Awards Winners are as follows: -



Product of the Year

Sponsored by PLANT & WORKS ENGINEERING

Fletcher Moorland: Meerkat Wireless Condition Monitoring System

The Meerkat wireless condition monitoring system was created as a low-cost yet effective ‘fit and forget’ system that can be bolted on to any product to make it a smart product. Being wireless it’s easy and quick to install in any environment. The cloud-based software and analysis tools makes keeping an eye on machinery simple. With automatic warnings of condition change, maintenance teams have time to react to a problem before a breakdown occurs.



Project of the Year

Sponsored by EMIR SOFTWARE

Houghton International: Full Stator Rewind and Core Rebuild

Due to its flexibility, commitment to quality and project management capabilities, Houghton International was selected to carry out a full stator rewind and core rebuild of a 26 tonne, 10 MVA nuclear safety significant Brush generator, bringing it back up to specification. Working to the agreed budget and timescales, Houghton International delivered a high-quality repair that adhered to the latest quality, environmental and safety regulations required for nuclear applications.



Service Centre of the Year

Sponsored by ABB

Central Group

Central Group is a family run business based in Merseyside, employing 80 staff across two sites in Knowsley and a third in the West Midlands. The business focuses on the repair of rotating equipment for industry as well as all associated electronics. With a dedicated sales office and a projects team for larger installations the company has a large and varied customer base across the whole of the UK and abroad.



Supplier of the Year

Sponsored by DRIVES & CONTROLS

Radwell International

Radwell International is an award-winning global leader in MRO and industrial automation solutions. With an inventory of over 20 million parts, they sell and repair new, used and obsolete products including PLCs, servo motors, HMIs, drives, hydraulics, CNC equipment and robotics. Their impressive 58,000 sq. ft. facility in Staffordshire houses a dedicated repair centre with over 2,600 testing fixtures. They offer a 24/7/365 emergency-call-out service and currently serve over 50,000 customers in 172 countries.



Contribution to Skills & Training

Sponsored by MUSK PROCESS SERVICES

Rotamec

Rotamec has developed a ‘grass roots’ training programme that works with local schools to identify potential engineers and open up a clear path for them as they start their career by offering work experience and apprenticeships. While many of our apprentices end up staying with us in full-time employment, others have gone on to develop their careers in other sectors. In all cases we provide mentoring during the training and help each apprentice to achieve their personal goals. By offering a modular education all our apprentices cover the basic requirements, while also having the opportunity to further study specific areas of interest and so begin developing a specialism.



Rising Star Award

Sponsored by FANUC UK

Callum Broadhurst – Project Engineer - Musk Process Services

Callum Broadhurst is a talented young Project Engineer whose engineering knowledge and project and client management skills frequently exceed those expected for his age and role. As well as being a conscientious Project Engineer, he is also a hard-working student, widening his own career opportunities by studying for a BEng alongside his full-time role, whilst working on his personal development to grow his engineering management skills. On top of this, he is a friendly, well-liked member of the team, and supports wider business initiatives such as marketing and charity fundraising.



Lifetime Contribution Award

Sponsored by AEMT

David Walters – Brook Crompton (Retired)

David was presented with this prestigious award for being a true champion of energy efficiency and electric motor design; someone who was pivotal in many technical developments for industry and indeed the Association throughout the entirety of his long and illustrious career. He was influential in developing the 'AEMT/EASA Rewind Study' and the 'Good Practice Guide to Maintain Motor Efficiency', which now forms the backbone for the new international repair standard that all service centres should be working towards. The diligence and time he put into raising the profile of our industry was illuminated in 1997 when he was made an Officer of the Order of the British Empire for his service to energy efficiency.



Charity Support for MS Society

As with previous events, it was again agreed that whilst celebrating all that is good in the electro-technical industry, the Association and all those involved in the gala awards dinner, should endeavour to raise some money for a charitable cause. So, as part of the

evening's proceedings, a game of 'heads or tails' was conducted, with the proceeds going to help one man's challenge to reach the South Pole on foot in aid of MS Society.

In December, Michael Mitten of Houghton International, an AEMT member company, will begin his trek across the final degree

of latitude, crossing 60 nautical miles (111km) in freezing temperatures and extreme conditions in order to reach the South Pole. He will be taking on this momentous challenge in memory of his mum, Christine, who sadly passed away in 2016 following a long battle with multiple sclerosis (MS). His aim is to raise £50,000.00 and in turn deliver increased awareness of this debilitating condition which affects over 10,000 people in the UK alone.

The AEMT is delighted to have set him on his way with a fantastic £1620.00 being raised during the evening, although with many pledges of additional donations being made, that figure will undoubtedly increase over the coming weeks.

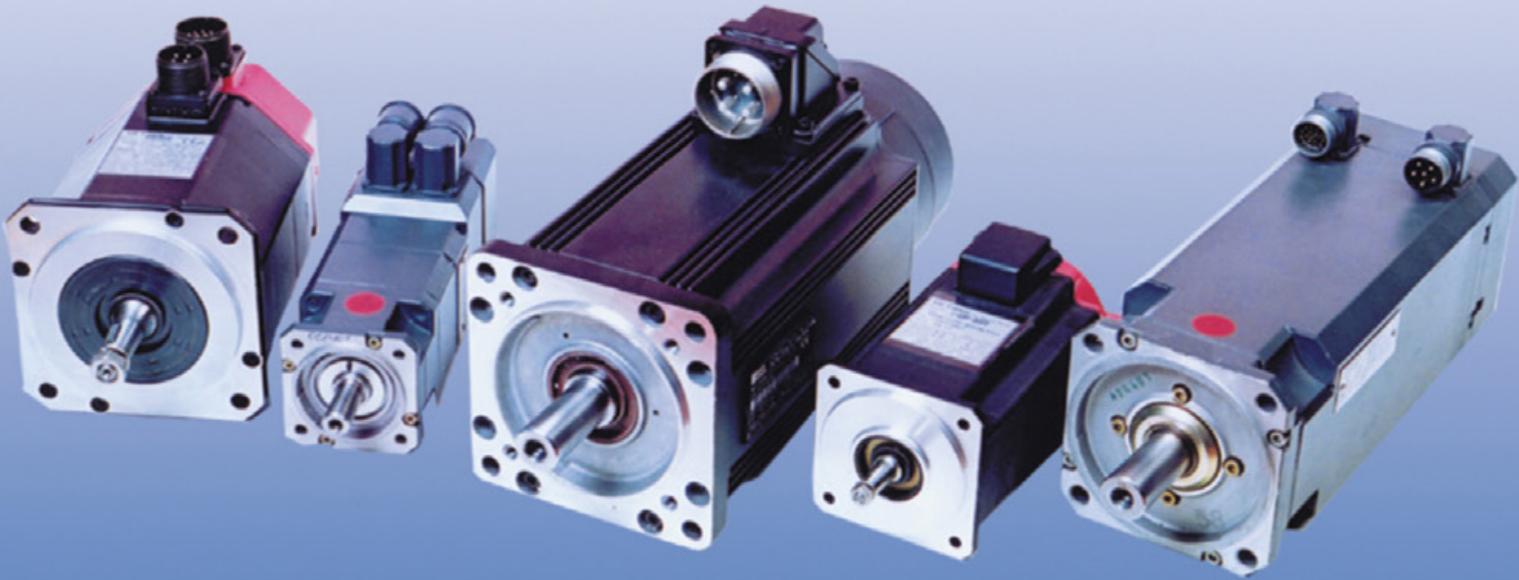
For further information on this remarkable fundraising venture, and to make any donations, please visit the dedicated website - <https://polesapart2019.com/>.

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