

Bulletin

Association of Electrical & Mechanical Trades

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All the news found in this newsletter is also available to read on the new website.

Follow us on our social networks, or visit the site regularly for news updates.

www.aemt.co.uk/news



Rapid HV Rotor Repair Causes Minimum Disruption to Oil Refinery

When regular maintenance checks on a high voltage 60MW generator at a large oil refinery signalled a potential earth fault in the rotor, engineers were keen to have a repair completed as soon as possible. The engineering manager contacted Sulzer to carry out the repair and subsequent testing, who were able to offer an efficient, bespoke service to repair the rotor in just 8 weeks.

In the power generation business, speed is of the essence, especially for maintenance work that can result in generating capacity downtime. When it is the generator's rotor itself that needs repairing, the timing of the steps toward resuming normal output is crucial.

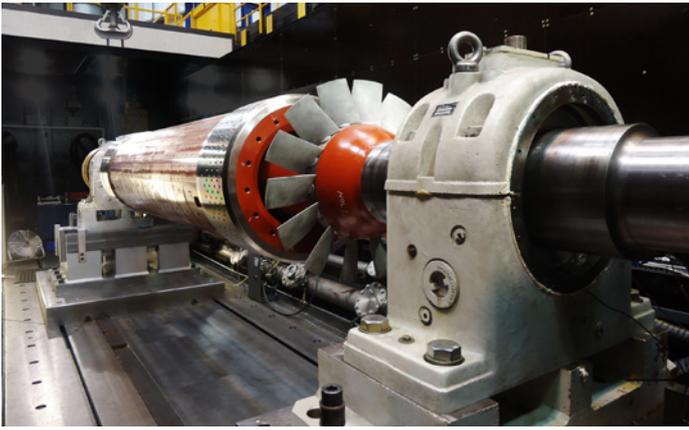
With lost production costs looming, a plan was put into action. The rotor was shipped from Italy to the Birmingham Service Centre site, where work began on the initial strip down. In a project such as this it is frequently possible to reuse the rotor's retaining rings, provided they are in satisfactory condition. However, detailed inspection following the strip down revealed that in this case they would have to be replaced.

To provide a quick solution for the client, Sulzer was able to produce a set of replacements for the vented 800mm diameter stainless steel rings utilising its established materials supply network and in-house large precision machining facility.

In many cases rotor windings can also be reused, having first cleaned them and reapplied the insulation. However, in this instance, reuse was not possible and so new windings had to be manufactured and tested before the rebuild could begin. Upon further inspection by the Sulzer team, it was found that the rotor body wedges would also have to be replaced; a further task for the designers and the machine shop. With all of the new components remanufactured and tested, the team could begin to rebuild the rotor.

Keith Barbier, Head of International Contracts and Projects at Sulzer Birmingham Service Centre, comments: "I have worked in this industry for

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>> over 30 years and seen many rotors being repaired. It is rare for all three components to be in need of replacement at one time. Our repair team at Birmingham Service Centre was able to remain flexible and we were able to deal with every aspect of the rotor repair, managing the project from concept to completion on behalf of the client."

On completion of the rebuild and the electrical, static, and

mechanical tests, the rotor was then checked for rotational balance, using the company's own purpose-built large capacity overspeed balancing pit.

During the process the rotor is first accelerated to its normal operating speed of 3,000 rpm, any balance corrections are made, then the rotor is subsequently tested in an overspeed condition, in this case specified by the client at 3,600 rpm.

The balancing facility in Birmingham can accommodate rotors up to 12 meters in length and weighing up to 40 tonnes, with the ability to test at speeds up to 5,200 rpm. High-speed balance relieves residual stresses introduced during the repair process and allows the rotor components to settle into place. Following a high-speed balance at the Birmingham Service Centre, engineers review the results to ensure that any imbalances have been corrected and will not affect the future performance of the rotor. This forms the final step in a truly unique in-house, turnkey offering for the power generation industry.

Keith Barbier concludes: "Fortunately the client employed excellent proactive maintenance procedures, which were able to highlight a potential issue before it developed into a fault, and we were able to manage the project in-house. This meant we could control costs and meet very short deadlines. This was even more

crucial, as the task escalated in complexity and resource requirements, whilst keeping the client informed throughout the repair process."

Repairs completed in the past have proven the effectiveness of Sulzer technology for rotor rejuvenation. Rotors that would have been considered as scrap a few years ago can now be successfully re-engineered using sound engineering repair solutions. An extensive repair of this nature can normally be completed significantly quicker than a new rotor can be manufactured. Additionally, the cost of a repair of this nature is approximately a third of the cost of a new rotor. The cost control and time effectiveness of the processes have benefited the client, who experienced minimal disruption and downtime costs as a result. ■

What does an AEMT member's workshop look like?

Until now you would have to go and visit the workshop to find out. But Fletcher Moorland have embraced Google's Business View technology to take their customers on a virtual tour of their Stoke on Trent based workshops.

Managing Director of Fletcher Moorland, Matt Fletcher said "When I was approached by a design company with a product that would enable users to have a virtual tour of our workshops I jumped at the chance. Most people have heard of Google Street View and taken a look at where they live or the surrounding areas. Now Google have Business View, we've adopted this where



prospective customers can take a look at our workshops from the comfort of their own PC or iPad."

Many people don't know what to expect a repair facility to be like, but we are proud to show potential customers our clean, light and very up to date workshop. This could have an influence on the future of the trade encouraging young aspiring engineers to come into

our industry. Now with Google's Business View it's time to 'show off' our trade and workshops for all those with an interest. Customers too can benefit from viewing a repair facility, most do not have the time to spend a day, or even a few hours out of their company to see where they are sending their equipment. Less than 5% of customers we have spoken to have gone to see their repair company. Hopefully this will now change.

Fletcher Moorland offer a range of services from the traditional and expected service of electric motor repair and rewind, to automation and servo repair, machining, pump, gearbox and fan refurbishment.

Visit the news area of the AEMT website to view links to Fletcher Moorland's Google Business View. ■

120% Increase in Visitors to AEMT.co.uk

After 70 excellent years servicing the industry, the AEMT has been awarded a welcome facelift. You will find a new vibrant look that follows through from the newsletter onto our website, journals and yearbook.

The association continues to represent members who service and repair industrial, electrical and mechanical machinery; and continues to promote and support the engineering excellence of their businesses. Now the association moves into the digital world to provide you with a website reflecting these aims.

You will find the website centres around its members. The first thing you should discover is the search facility, to help visitors find a local or international member easily using the quick search box. Filters will help you narrow down the search results.

Members can switch to the supplier search to find manufacturers and national distributors of motors, pumps and ancillary equipment who could better serve their business.

To further improve our 'digital yearbook' the website holds all the most up to date information that quickly gets outdated in a yearly publication; such as the latest Events, Ex Course Dates, Industry News, Technical Information and Documentation.

However, the AEMT is more than just its member companies, it's the individuals in them too. Which is why we have set up a dedicated careers portal for managers to understand what training

we provide or to advertise career vacancies.

There is also a place to advertise surplus stock, unwanted machinery or even your own business!

Since the website launch on 23rd October, we have

seen over double the number of visitors (year on year) arrive to the website with 1 in 10 using the Member Search tool. ■



New General Manager at Quartzelec Swansea



Quartzelec's expanding customer portfolio and growing order book in South Wales has led them to appoint Keith Evans as the new General Manager for its Swansea operation.

Keith has been formally trained and with over 35 years of experience in the electrical sector, and has a wealth of electrical engineering, business development as well as senior management experience and is

eager to develop and help move the operation forward as well as assist other local businesses grow and prosper. Previous roles have included those of General Manager within the global rotating electrical machines environment and as an Account Director within the specification environment.

For the interim, Keith will work alongside Peter Owen (the incumbent General Manager who is planning to retire in early 2015). Peter has been directly involved in the management of the Swansea business for over 50 years, having originally established it with colleagues as Teamseed in 1983 before it was acquired by GEC Alstom back in 1997 and now trading as Quartzelec.

"Peter and his team have built a fantastic and well respected business over the years and the local business community will both sadly miss him while at the same time wish him all the best for his impending retirement,"

stated Keith Evans. "Quartzelec is taking the succession planning for this part of the business really seriously. Having a professional handover period means we will continue to deliver the un-interrupted, first class, professional and personal services that many of our customers in the local steel mills, petro-chemical plants, power stations and general engineering works have come to expect."

So many blue chip customers and industries in the South Wales area are poised for growth. Quartzelec can deliver a complete Low Voltage and High Voltage electric motor and generator repair, maintenance and rewind solutions throughout South Wales, boasting many of the important skill sets required to help customers achieve their objectives.

Over the past couple of years Quartzelec has heavily invested in its people and facilities, which together are helping grow the business with its customers.

This includes: recruiting experts for key roles when and where required; delivering an active apprenticeship programme; opening a new multi-million pound fabrication facility in Rugby that also doubles as a corporate HQ; Opening several new maintenance and operational sites around the UK and expanding internationally, by establishing a presence in several key markets and developing close relationships with key business partners.

Looking at business performance, Quartzelec's rapidly expanding electrical contracting business has secured a number of significant £1m+ contracts over recent months while its maintenance business for rotating machines has secured many prestigious, mission critical contracts in the manufacturing, maritime and mining sectors. There are also a myriad of smaller, preventative maintenance contracts which all add up and Quartzelec is being asked to tender for new projects on a daily basis. ■

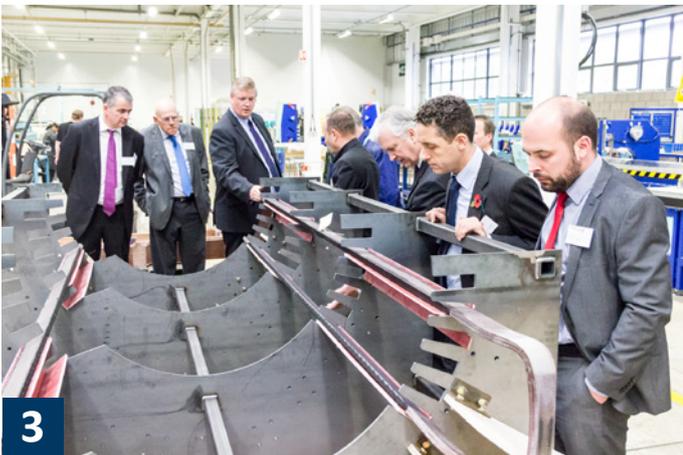
AEMT Members Visit Quartzelec

On October 29th, 35 AEMT members attended the Autumn meeting, which commenced at nearby Brownsover Hall, with a series of Quartzelec led presentations. Mick Richmond, Design Manager of Insulation Systems, gave a fascinating talk highlighting Quartzcoil's current world class insulation systems and High Voltage coil manufacturing processes including a brief view on what, where and why different solutions are applicable.

Richard Gill, Electrical Engineer of Condition Monitoring and Technical Products at Quartzelec then introduced members to the company's new Lifeview® monitoring system. The presentation discussed how

condition monitoring can be a key component in reducing the total cost ownership over the lifetime of a high voltage machine.

In the afternoon, AEMT members had the opportunity to view Quartzelec's new coil winding and high voltage maintenance and repair workshop facilities. What was of particular interest on the tour was the state-of-the-art electrical loop winder facility, part of a £1.25m investment programme. Designed to meet growing customer demand for high precision coil and bar products, the Roebel bar assembly and coil forming equipment is a key component of the Quartzcoil operation and was commissioned during the Spring of 2013. ■





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1. AEMT Delegates at the Quartzelec Facility.
2. Robert Shoebridge of Shoebridge talks to Simon Swallow of Rotary.
3. AEMT Delegates touring the Quartzelec Facility.
4. Paul Hirst of P.A.R. Insulation and Wires.
5. Mick Richmond of Quartzelec presents to AEMT Delegates.
6. Simon Cattel and Alex Page of Mid Kent Electrical.
7. Richard Gill of Quartzelec presents to AEMT Delegates.
8. Mick Richmond of Quartzelec with Len Jones of Parsons Peebles.



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Some of the EMIR team. From left to right: Steve Ashman (sales), Krystyna Malinowska (trainer), Latika and Gary Downes (accounts/sales) and John Anderson (development).

September 2014 sees another milestone for Solutions In I.T. and their leading software business solution - 20 years of EMIR development!



In 2014, EMIR, short for Electro-Mechanical Information Resource can boast over 2,000 users around the World using 3 versions of EMIR: EASY, Standard and Professional. The latter products are equipped with 6 fully featured

core EMIR Modules along with 8 Extensions which now meet the diversities of Service & Repair, Sales & Distribution, Manufacturing Assembly and Hire. In recent months, a Cloud version of EMIR has been added to meet the demand for secure, hosted business software including Email and Microsoft Office without the need for any on-site server hardware.

Gary Downes, the Managing Director of Solutions In I.T. adds, "As a business, we continue to strive to improve EMIR on a daily basis. We have a loyal customer

base that motivates the team to develop EMIR to satisfy the growing and ever-changing needs of the market. Over the next few years, you can expect to see even more new Modules and Extensions to further enhance the core EMIR software such that our customers can continue to benefit on a daily basis - knowing that our EMIR solution will work for their businesses, no matter how diverse their business offerings are or become."

EMIR continues to sell internationally through Gary's time on the AEMT council and other

Job Positions Available

**Invincible Rewinds
Motor Rewinder/Fitter**
Location: West Midlands

- Experienced in AC / DC and HV Motor Rewinding.
- Brake coils and Transformers, All aspects of fitting including Motor, Pump and gearbox repair / overhaul.
- Willing to work with an on-call rota for emergency work.
- Computer literacy would be beneficial.

Contact Details:

Please apply, in strictest confidence, and in writing, to Phil Baker, enclosing your full CV in writing or on-line to phil@invinciblerewinds.co.uk

associations. This considerable business growth has aided expansion and the recruitment of new staff in the areas of sales & marketing, technical support and, of course, software development.

John Anderson, EMIR's Development Director adds, "We'd like to thank you, our customers for our continued success. Our recent EMIR Open Day has taught us that our customers run complex and unique service businesses and EMIR will need to continue to develop to meet those ever changing needs." ■

EMIR CRM Version 4 set for Release in November!!

The EMIR Customer Relationship Manager Extension has seen two major releases in 2014. Version 4 promises a range of advanced functionality tightly integrated with EMIR. Book a place on our FREE EMIR CRM Open Event.

Details on our website: www.solutionsinit.com/news/crm-new-release ■

Job Positions Available

RE Field Services Ltd

High Voltage (HV) Test Engineer

Location: Yorkshire & Humberside

Deadline Date: 28 November 2014

Key Responsibilities

- Perform an extensive range of electrical tests to approved safe procedures and relevant standards on a large range of electrical machines.
- Accurate recording and analysis of results.
- Writing of clear and concise technical reports including conclusions and recommendations.
- Liaison with customers over technical queries.
- Fault finding and emergency call out site support.
- Supporting multidiscipline teams of field service engineers during site projects.
- Supporting technical assessments of customer machines in works.
- Maintaining test and equipment records.
- Assisting with the further development and expansion of test facilities and equipment.

Key Qualifications and Experience

- Proven track record of conducting diagnostic testing including IR/PI, Tan δ , Hi Pot, PD, ELCiD, RSO & HF within a similar motor/generator service or manufacturing environment.
- Educated to minimum HNC/HND level in a relevant engineering or technical discipline.
- Have practical experience in high voltage electrical testing of large electrical machines.
- Knowledge and experience of working to standards.
- Self-motivated with a high regard for safety and quality.
- Fluent English speaking with good verbal, computer and written skills.
- Highly organised and able to work with minimal supervision or within multi-skilled team.
- Familiarity with Automatic Voltage Regulators, Excitation Systems, Generator Protection Schemes and I & C circuitry would be an advantage.

Contact Details:

Please send CV and covering letter to David Graham - Production Manager at Parsons Peebles Generation Ltd, Wood Road, Royal Dockyard, Rosyth, Fife KY11 2EA or email to david.graham (at) parsons-peebles.com

Parsons Peebles Generation Ltd

Test & Service Engineer - HV Motors & Generators

Location: Scotland

Deadline Date: 31 December 2014

The Company

Parsons Peebles are one of the global leaders in the design, supply and service of high voltage motors and generators. We have the largest installed base of motors for the North Sea and a growing presence in other sectors. A key part of our offering is our ability to offer a full load test at our Rosyth facility.

The Role

Reporting into the Production Manager, this vital role involves joining a small team of engineers dedicated to testing and servicing high voltage motors and generators and to maintain the equipment and infrastructure required for the task. The candidate will be based at our main facility at Rosyth Dockyard and will also be required to perform duties both offshore and world wide.

Further aspects of this role include:

- Operate test plant and equipment and perform a diverse range of tests on HV motors and generators
- Test products to ensure compliance with applicable specifications, standards and legislation
- Record, analyze and document test data and prepare test reports
Develop both testing and recording techniques
- Work closely with the manufacturing, engineering and commercial units to ensure that production and service targets are met
- Initiate and develop condition monitoring both in the manufacturing facility at Rosyth and in the field on customer's plant

Necessary Skills

Successful applicants should be used to working in a fast paced service environment and have the following skills:

- Knowledge and experience working with high voltage equipment, specifically high voltage motors, generators and switchgear
- Have the ability to work on their own initiative and have both good communication and decision making skills
- Have knowledge and experience of condition monitoring techniques and measurement procedures applicable to motors and generators
- Be both familiar and competent with the use of IT and test instrumentation

Package & Application Process

An excellent remuneration package is on offer, including a contributory pension scheme.

Contact Details:

Interested applicants can apply via email with a covering letter and sent to: kerry.patrick@refieldservices.com by the closing date of 28th November 2014.

Enclose a full CV and any additional information you may feel is relevant to your application for the post.

Equipment For Sale

Siemens plc

Siemens Low Voltage Stock Offer

For a full list of product details please visit the Buy/Sell area of the AEMT website.

Almulla Group

Vacuum Pressure Impregnation (VPI) System

EpoxyLite Corporation VPI System for Sale Price: \$120,000

VPI process tank with top lid size : 96" Outside diameter x 96" height, 18000Lbs

Resin storage tank with agitator size : 84" OD x 96" height, storage capacity 2500Gals, about 6000Lbs

With Hydraulic system for opening and closing of lid of VPT tank

Control panel to operate the VPI system and all piping system

This system was not in use for more than one year

Contact Details: Vijay Rawale, Group Manager: Electrical & Mechanical Equipment Maintenance, Bader Al Mulla & Bros Co. W.L.L.

Engineering Group, Post Box 177, Safat 13002, Kuwait.

Mob: +965 66800104 **Tel:** +965 - 24815077 Ext 4440/4441

Fax: +965 - 24839725 Ext 450

Email: rewinding@almullagroup.com; vjrawale@almullagroup.com

Equipment Wanted

Chenpump CPMR

1x burn off oven poss. oil
1x baker surge tester
1x motor test panel
Any rewind formers or motor rewind equipment

Contact Details:

Please contact Aaron Bray, Director at CPMR / Chenpump UK on

Tel: 01752 695 688

Email: aaron.bray@chenpump.com

New AEMT Website

There are many more features coming to the website that will enable you to market yourselves more successfully through aemt.co.uk. And we will introduce you to these as they come.

In the meantime, please check your member profiles, by searching for your company name from the homepage. If there are holes, gaps or things missing that you expected to see on the page please let us know what needs adding/removing. Contact admin@aemt.co.uk or call 01904 674 899

Shortly you will have the ability to edit your own profiles, add photos, videos and testimonials in order to capture new leads and make them really understand who you are before they get in touch with you.

AEMT website

All the news found in this newsletter is also available to read on the new website.

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www.aemt.co.uk/news

AEMT Training Calendar

2014

November 17-18th	Dubai	Ex Theory Course	Mod 1
November 19-20th	Dubai	Ex Hands-on Course	Mod 2
December 2-3rd	Rugby	Ex Theory Course	Mod 1
December 4-5th	Rugby	Ex Hands-on Course	Mod 2
December 9-10th	Rugby	Ex Hands-on Refresher	Mod 3

2015

February 2-3rd	Bahrain	Ex Theory Course	Mod 1
February 4-5th	Bahrain	Ex Hands-on & Refresher	Mod 2R
March 3-4th	Loughborough	Ex Theory Course	Mod 1
March 5-6th	Loughborough	Ex Hands-on Course	Mod 2
March 9-10th	Loughborough	Ex Hands-on Refresher	Mod 3
March 16-17th	Indonesia	Ex Theory Course	Mod 1
March 18-19th	Indonesia	Ex Hands-on & Refresher	Mod 2R
April 20-21st	Amsterdam	Ex Theory Course	Mod 1
April 22-23rd	Amsterdam	Ex Hands-on & Refresher	Mod 2R
April 28-30th	Loughborough	Maintenance & Inspection	Mod 5
May 12-13th	Loughborough	Ex Theory Course	Mod 1
May 14-15th	Loughborough	Ex Hands-on Course	Mod 2
May 19-20th	Loughborough	Ex Hands-on Refresher	Mod 3
June 1-2nd	Malaysia, KL	Ex Theory Course	Mod 1
June 3-4th	Malaysia, KL	Ex Hands-on Course	Mod 2
June 15-16th	Aberdeen	Ex Theory Course	Mod 1
June 17-18th	Aberdeen	Ex Hands-on & Refresher	Mod 2R
June 29-30th	Isle of Man	Ex Hands-on Refresher	Mod 2R
September 8-9th	Loughborough	Ex Theory Course	Mod 1
September 10-11th	Loughborough	Ex Hands-on Course	Mod 2
September 15-16th	Loughborough	Ex Hands-on Refresher	Mod 3
September 28-29th	Thailand	Ex Theory Course	Mod 1
September 30-1st	Thailand	Ex Hands-on & Refresher	Mod 2R
October 13-14th	Loughborough	Ex Hands-on Refresher	Mod 3
October 19-20th	Singapore	Ex Theory Course	Mod 1
October 21-22nd	Singapore	Ex Hands-on & Refresher	Mod 2R
November 2-3rd	Aberdeen	Ex Theory Course	Mod 1
November 4-5th	Aberdeen	Ex Hands-on Course	Mod 2
November 9-10th	Aberdeen	Ex Hands-on Refresher	Mod 3
November 16-17th	Qatar	Ex Theory Course	Mod 1
November 18-19th	Qatar	Ex Hands-on Course	Mod 2
November 23-24th	Qatar	Ex Hands-on Refresher	Mod 3
December 1-2nd	Loughborough	Ex Theory Course	Mod 1
December 3-4th	Loughborough	Ex Hands-on Course	Mod 2
December 8-9th	Loughborough	Ex Hands-on Refresher	Mod 3