

Production of commutators

We manufacture moulded, screwed, with shrinking rings and bandaged commutators for repair both of industry motors and of traction motors according to individual requirements of customers of following dimensions:

- brush-track diameter 50÷950 mm
- copper length 15 ÷ 600 mm

Copper: Cu-ETP, CuAg0,1

In case of need we can reuse old steel parts of commutators.



Production of slip-rings

We manufacture slip-rings for repair according to individual requirements of customers of following dimensions:

- rings made of bronze - diameter: 100 ÷ 350 mm
- rings made of steel - diameter: 200 ÷ 850 mm
- length of slip-rings: 60 ÷ 300 mm

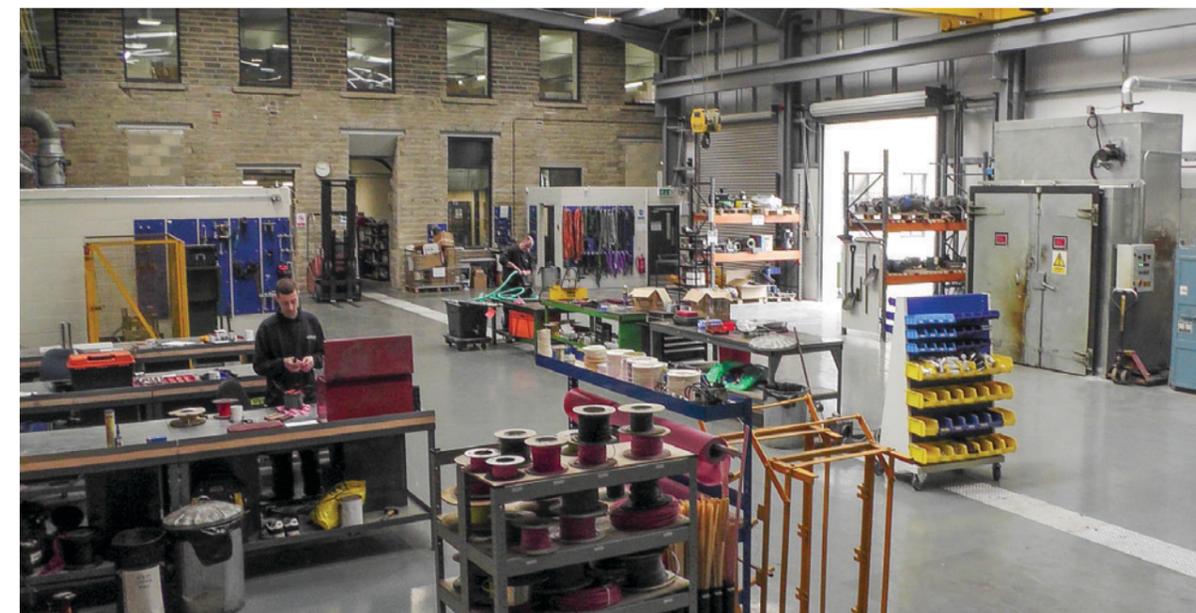


Repair of electric motors

We are in a position to repair following motors:

- Induction motors 3-phase single and multiple - speed motors
- motors of special construction
- DC motors and AC motors
- Direct - Current generators and alternating - current generators, exciters, amplidynes, frequency converters.

Winding of new laminated core assemblies as a service (series production).



Westin Drives presents an attractive blend of old and new.

Westin Drives' refurbished workshop and facilities.

A former textile mill in Huddersfield which played its part in powering the Industrial Revolution is witnessing another revolution. Steve Ashman of Solutions in I.T. spent a day at Westin Drives to discover how it is benefitting from a £1m-plus investment.



From the outside, Westin Drives presents an attractive blend of old and new. At its heart is Grove Works, a 19th century former textile mill, whose carefully restored stone facade rises above a new, steel-clad service centre. Inside, its rebirth is expressed in a stylish mix of exposed brick and stone, white walls and contemporary furniture.

This is the new home of the Huddersfield-based electro-mechanical engineering company. A few months ago, as part of a £1m-plus investment, it moved its team, equipment and stock from cramped premises with limited access to this spacious service centre set in a large courtyard.

Westin Drives offers a quality professional rewind and repair service that goes beyond the normal practices of smaller workshops. For example, a

full health check on equipment, as a stand-alone item or part of its primary installation, is provided, no matter what the reported issue. A repair by its engineers is not only guaranteed, but meets the highest industry tolerances.

Group managing director Ian Sheppard says: "The last thing customers want is to spend good money for a rewind, only to find that they later have three or four days of lost production through failure of the same component or a related issue. This focus on quality will inevitably be the key to our success."

When Ian joined Westin Drives six years ago it became apparent there was an increasing need for growth on the technical side of the business. The problem was covering it with existing manpower. That challenge has now been met, enabling the company to expand

its range of services to become a one-stop shop for the repair and servicing of industrial machinery and the design and installation of electrical control systems.

Technical Training for customers

To underline its breadth and depth, recent innovations include the establishment of an in-house Precision Engineering department and the provision of technical training courses. As Service Manager, Michael Limb, says: "It certainly simplifies things if you have one port of call when an issue arises."

Engineers in the technical team offer training to customers to help them recognise why faults occur, understand the benefits of preventative maintenance and enable them to make simple repairs and replacements.

Improve Machine Reliability through Precision Shaft Alignment

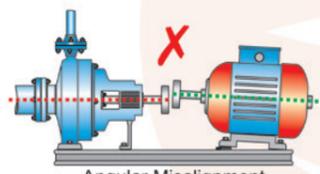
Stats show that poor shaft alignment accounts for as much as 50% of rotating plant failure.

Management buy-in and adopting key maintenance elements, sets the standard toward reducing unplanned plant stoppages.

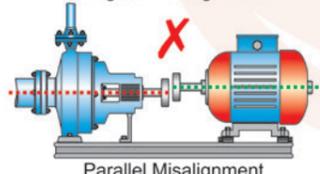
By employing Fixturlaser's cutting edge alignment technology, VertiZonal™ Compound Moves, your plant reliability will be improved. **Contact us for a demo.**

E-mail: sales@fixturlaser.co.uk

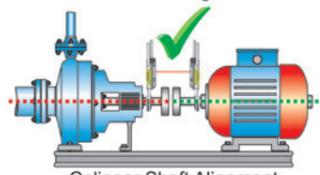
Tel: 01909 251001



Angular Misalignment



Parallel Misalignment



Colinear Shaft Alignment





KENWORTH
Products

ELECTRIC MOTOR SPECIALISTS
WE STOCK WHAT OTHERS DON'T

PRODUCTS



KENWORTH PRODUCTS
Units E1/E2
Meltham Mills Industrial Estate
Meltham, Holmfirth
West Yorkshire
HD9 4AR

Tel: 01484 660 222
Fax: 01484 660 333
E-mail: enquiries@kenworthproducts.co.uk
www.kenworthproducts.co.uk



IE1 / IE2 / IE3
230 & 110V - Single Phase
Two-speed
High Output
Brake Motors
EExd(e)
ExnA

Marine Motors
Slip Ring
Nema
CSA/UL Metric
Medium & High Voltage
B56 Fractional
Coolant Pumps

Forced Ventilation
Slide Rails & Bases
D.O.L. & Star Delta Starters
Motor Spares
Universal Motors Inverters
Universal Motors Gearboxes



Newly installed XYZ 1020 VMC CNC milling machine, which has the capacity to produce much of the work that was previously contracted out.



Employee receives new work into workshop using tablet device.

Ian admits to an initial problem with this concept: "I thought, wouldn't training and skill transfer simply make the customer less reliant on our skills as an engineering firm? - but the opposite is true. By offering a programme of education, you are helping your client to work closely with you. You get to understand their needs in detail and that close working relationship gives the client more reason to want to work with you."

Oven Facilities

The ground floor offices lead to the airy expanse of the new workshop extension, notable for the two synchronised, ten tonne overhead Street cranes. Here operations are clearly defined. Everything is clean and uncluttered, everything has

a place. The goods-in area has storage for small motors; the large motor area, whose floor has been reinforced to accept deliveries, is serviced by the cranes. In the next bay stand two ovens.

The first oven is used for drying parts after they've been washed but its main purpose is for stoving a rewind with impregnation resin. Rewind coils need to be hardened when first sited in the motor and prior to it being energised and this is where innovation has taken over. Historically, varnish would have been used for this process, but here Westin Drives chose to change the process, especially when the advantages of using a less toxic, epoxy resin style product are deemed more effective and green friendly. As technical manager Fraser

Lynch says: "Resin is more expensive but it's easier to use and safer on the environment: decisions like this will always be made by us."

Next is the burn out oven, a simple and clean way of removing old insulation, varnish, epoxy, paint and other organic material before the repair takes place. The oven can operate at at 360C to 370C degrees – enough to remove varnish and enamel from the copper without damaging the stator laminations or the dielectric.

Before today's strict environmental laws, a naked flame would be used for this process, risking damage to the motor's efficiency. After eight hours of heating and cooling the majority of the motor is placed in a parts washer, an aqueous, non-toxic washing machine that automates the final element of cleaning, allowing technical labour to be used more efficiently elsewhere.

Rewind Facilites

In the far corner of the service centre stand the rewind machines. They are central to the business and serve the six benches allocated for coil replacement, small repairs and motor building. As part of the company's commitment to quality and training, each engineer is allocated a complete toolkit and access to a tool wall for all larger communal tools.

Why this investment in personalised tool kits, and are they common in the industry?

Fraser says: "By having the right, good quality tools to hand, you ensure standardisation of working practices and speed. In the past, like so many others, each engineer would gather tools over a period of time in the industry, but 5S showed us that this wasn't necessarily the right way forward."

5S is a system of workplace organisation adopted by Westin Drives as part of a culture shift. Designed to improve productivity, safety and quality, it enables teams to organise the workplace in the most efficient way and its ultimate purpose is to increase customer satisfaction.

The testing area and spray bay complete the circle of repair, an enclosed area incorporating a balancing machine, a cast flat floor for securing the motor under strict tolerances and a range of electrical circuits and specialist cabling enabling the connection of DC and AC motors from the very small to 100's of kW on a variable 400Hz circuit.

Stock Holdings

Returning to the mill building, we find a store between the technical services room and the machine shop. Here, everything is boxed and ordered neatly on clearly labelled shelves – more evidence of the beneficial influence of 5S. This sizeable stockholding allows

"Lenze and Westin Drives offer much more than spares and repairs. Working with the Lenze portfolio which includes PLC controls, visualisation, inverter and servo drives, motors and geared motors, Westin offer complete solutions service for drives and automation. An example is the upgrade of machinery to make it faster, easier to use or more reliable. New control panels can be provided."

Neil Beaumont, Marketing Communications Manager, Lenze.

engineers to respond to instant demand to get customers up and running as quickly as possible: further evidence of the one-stop shop ethos.

Long standing relationships with WEG for electric motors, Lenze for control systems and SKF for bearings ensure the availability of quality products. These suppliers also bring more than simple distribution opportunities. Each provides accredited engineering programmes to complement the business and its aspirations for quality, all to be documented in ISO9001 and ISO15000, so customers can be assured that work is carried out to the highest standards.

Precision Engineering Shop

The precision engineering shop is a new addition. As I enter, Matt Phillips, the specialist mechanical engineer, is coating a spindle with metal spray, an impressive process of replacing worn metal with super-heated powder, allowing the item to be returned to its original specification. This is just one modern method of restoration, for the machine shop has the capability to manufacture parts from scratch ensuring a swift

turnaround.

The latest arrival to ensure this capability is a CNC milling machine, the XYZ 1020 VMC, which has the capacity to produce much of the work that was previously contracted out. One recent job involved creating an end shield for a motor and various shafts lost to abusive wear. It was turned on the lathe and the key slot was CNC milled to precise measurements, a complex task completed in a short time.

Matt says that detailed drawings are not necessarily required. Customers can come to discuss their needs and have drawings made electronically, or an item can be replicated from the original. In the matter of tolerances, the CNC is programmed to produce the highest specification – three decimal places variation – as laid down in the SKF Rebuilder Accreditation.

Customer Service

While technical and managerial innovation are fundamental to this company, perhaps its most conspicuous attribute is the attitude to service. Michael Limb says: "Our high quality of customer service is key to Westin. That's





Part of the workshop including the caged balancing area

what customers want, somebody who is interested in solving their problems, minimising their downtime. The biggest buzz you get is when you fix something. Everybody in the business wins, if you can capture that feeling."

Michael is proud of his team and of the work they do and of the general enthusiasm about the place. He believes that understanding customers, and being able to deliver what they want when they want it, is the priority. Honest communication is also valued. "If there is something we can't do, we should not be shy to tell our customers that," he says. Honesty gives the customer the chance to plan around the issues. Honesty and accuracy are very important."

Fraser, a hands-on technical manager, is a time-served apprentice who started with Westin Drives at 16. He began his career with seven months of full-time study at KITS, a training centre in Brighouse, as he worked through his NVQ's 1, 2 & 3. This led to day release while working towards an ONC in Electrical and Electronic Engineering, before achieving HNC standard, which he describes as really hard study work and assessments. Finally, after two years of Industrial Measurement and Control at

degree level, he achieved a B.Eng from Huddersfield University. The person I see today is a confident manager, charged with purpose and ability.

Does Fraser regard the modern apprenticeship as the way forward?

It seems the circle of training life has already been initiated. A young engineer, Connor Earnshaw, is following a similar route and has shown an aptitude for electrical maintenance which suits the testing and condition monitoring department, an important element of this company. Harry Stansfield is serving his apprenticeship in the workshop and has been with the company for two years and an additional apprentice was due to start in July.

The Westin approach to quality repairs is to offer the customer an insight into the working life of the equipment from every angle. Reported problems are not always the root cause of failure and additional downtime for supplementary repair can aggravate a working relationship. Again, this is where innovation and investment meet to broaden the scope of potential issues that can be investigated.

Predictive Maintenance

The company has spent heavily on predictive maintenance equipment for condition monitoring, vibration analysis, thermographic heat source monitoring, coil wear sensors and precision measuring devices. These items can be used before dismantling or repair to identify faults that may cause immediate damage, future failure, or affect the efficiency of a unit. Being open and honest allows engineers to make the right decision for the client and the life cycle of the equipment.

As part of the SKF accreditation and preferred working practices, Westin Drives customers are assured of far higher achieved tolerances on all repairs, as measurements are made to three decimal places (three millionths of an inch). Fraser insists that when a bearing housing is measured, the position of the shaft and alignment in the piece are guaranteed, ensuring longer and more efficient running time post repair. This is not an industry standard. Previous poor quality workmanship in jobs that arrive at the service centre is instantly noted as in the past repairs by smaller operations have led to premature failure. Cheap, warns Fraser, is not always cheerful.

Westin Drives brings a fresh approach to the industry. Operating from a 21st century service centre attached to a 19th century mill, it combines the best of innovation and tradition. With a laser focus on the customer, it has shed the old mentality of the engineering world to present a bold approach to problem solving. And with capabilities and a drive for quality well above the industry standard, the future of this old spinning and weaving mill is once again assured. ■

JOIN US AT THE 2017

EMIR

Electro-Mechanical Information Resource

OPEN DAY

AT THE HOME OF BRITISH MOTOR SPORT



NEW PRODUCT LAUNCH AT THE OPEN DAY

- The Big Event of the Year! The launch of EMIR Dashboards using Microsoft's Power Bi
- Linked to your live EMIR system, Dashboards are an interactive and graphical on-screen report that displays summary and detail information
- A suite of reports including: Sales Ledger, Finance, Quoting, Job Statistics and Labour have already been completed and previewed at the Pro Awareness Day in May
- You can use EMIR Dashboards off-the-shelf or have them tailor-made to your business

2017 DEVELOPMENT AND INNOVATION

- Reports on customer success using Workshop Routing and Time & Attendance
- New versions of Smart Site V3 and CRM Version 7
- The EMIR Development Plan and new features in Standard and Professional
- Working with the AEMT – the Future of the Association – Presidents update

FUN AND GAMES AND A LITTLE EDUCATION

- Our popular gameshow will return with even more chances to win big prizes
- A chance to win a driving experience at Silverstone
- A tour of the venue including back stage passes to race control, the pits, media centre and circuit – not to missed!

THURSDAY 28TH SEPTEMBER

In the Wing International Media Centre at Silverstone, Northamptonshire



WESTIN DRIVES OPEN DAY

Wednesday,
13th September.

"The new Westin Drives facility has been well thought through for work flow, applying the 'Dirty In and Clean Out' approach with proper segregation and control of tear down (dirty) - and assembly (clean) areas. Their new facility in Huddersfield is well equipped to effectively and efficiently handle motor repairs. I look forward to following the success of Westin Drives and thank them for their support of the community of SKF Certified Rebuilders."
Jim Fowle, Global Manager Certified Programs, SKF

To reserve your place call 0845 009 4588
or email info@solutionsinit.com

ANOTHER EXCITING YEAR FOR EMIR AND OUR USERS,
CELEBRATE WITH US AT THIS ICONIC VENUE