

# WESTIN DRIVES

electro-mechanical engineering services



**NEWS UPDATE July 2020**

[www.westindrives.com](http://www.westindrives.com)

## Recognition from college

Several Westin Drives apprentices have trained at Huddersfield College's specialist engineering centre and we are pleased to see our partnership acknowledged with a wall plaque. The centre is renowned for its high level of teaching and for excellent facilities.

## Surge in demand

We have invested in a portable, 12kV surge tester to give customers the most effective electric motor rewind service.

It is used to diagnose problems with motor windings that arrive for repair and for the final check on finished jobs before they are returned.



## New face

A warm welcome to our new apprentice. Rico St Hilaire, 17, above, began engineering studies at college last October and is continuing them online because of Covid19.

# How our engineers wound up making a winding machine

Our engineers are a smart bunch: when we needed a new winding machine, they designed and made one.

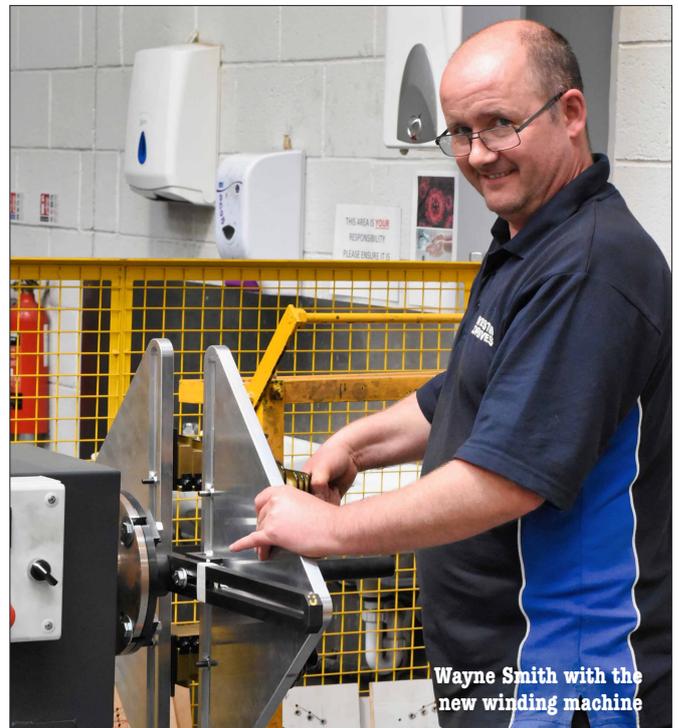
The replacement of two old machines was driven by a desire to improve efficiency and maintain the highest standards.

And the process brought together a variety of in-house disciplines.

Workshop manager Steve Ormondroyd was in charge of the overall design and build and our technical services team devised and built the control.

The motor and gearbox were sourced internally and our machining department made the coupling.

In fact, the only element to be outsourced was the framework. The machine has two winding heads and can measure the speed of



Wayne Smith with the new winding machine

rotation and the number of turns on a coil. The advantages to customers and our team? A quicker

set up and greater flexibility. In addition, we can now wind motors up to 1,000kW.

## Motor that ran on water

The electric motor, right, came from a pit in a dye house and hadn't run for years. Water poured out when we opened it.

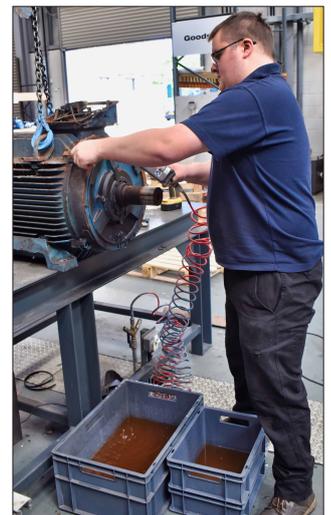
The customer wanted to use it again, so it was switched on and ran at the client's firm about half an hour until someone reported water splashing out of the terminal box.

It turns out the motor had been flooded at some

stage without anyone noticing. How the windings didn't blow amazed us.

In fact, when tested by Jason Kilner (right), they were in excellent condition, passing all our electrical tests.

We also balanced the rotor, fitted new bearings and gave the motor a test run before giving it a fresh coat of paint and returning it to the customer.



# Engineers in sprint to save production

By Fraser Lynch

The bird's nest of wires, bottom right, is what met our engineers when they went to a breakdown in a textile factory in West Yorkshire.

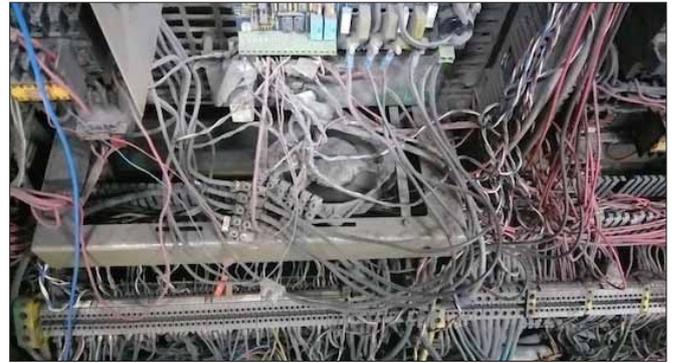
A Sprint Electric dc drive, more than 20 years old, had failed during a busy production period.

As can be seen, it was not in the tidiest or safest of environments. The cooling fan, for example, can be seen hanging off the original drive.

But nothing fazes us – even the fact there were no electrical drawings or wire numbers!

Westin Drives is a Sprint authorised distributor and service provider, so, by working until nearly midnight, our team had a new Sprint Electric PLX20 retrofitted and commissioned the same day.

The Sprint PLX drive has proved very versatile, perfect for urgent retrofits of all dc drives, with same day delivery up to 1MW.



## Upgrade creates a stir

Our team found a bright way to upgrade a paint-stirring machine that ran at only one speed.

The client's firm needed to diversify its paint offering, but the single-phase agitator was not up to the job.

A cost-effective way was required to make it to run at variable speeds to reduce over-agitation of certain paints and to increase it for others.

Electrical engineer Adam Daffern, supported by workshop manager Steve Ormondroyd, proposed a solution.

Single-phase motors have limited and expensive vsd controls, so a progressive output three-phase motor and single to three-phase IP66 inverter from Invertek was offered.

The existing gearbox was retained as it was perfectly serviceable.

The customer agreed and was delighted to have the agitator running with only 24 hours of down time.

## Taking the balanced view on motor, pump and fan repairs

By Steve Ormondroyd

Balance is a critical aspect of any piece of rotating machinery and the ability to measure and rectify imbalance is a vital part of our servicing procedures.

Operating a machine with an imbalance problem will shorten its life significantly.

Imbalance creates stresses, particularly within the bearings, which can cause premature failure.

We have invested significantly to increase our balancing capacity to provide a complete service for customers.

Our two balancing machines allow us to balance rotors from 200g up to 2000kg. We also have the capacity to perform on-site balancing for fan impellers.

The same technology can also be applied in the workshop on pump impellers, fan impellers, couplings and pulleys

while fitted to the motor.

Customers can take comfort that we check their rotors as part of our standard repairs, regardless of whether it is a routine service or a breakdown.

Once we have completed a repair we use vibration analysis to ensure the motor is mechanically sound during the test run. We use this test to look for imbalance problems and bearing defects prior to dispatch.

## Keeping tabs on the progress of jobs

By Michael Limb

At Westin Drives we aim to optimise processes to give customers accurate information about progress on jobs.

To enhance our service, we have collaborated with our management system providers to develop

Workshop Routing, a software tool that runs on Android tablets.

It enables engineers to enter data into the service system to generate real-time customer reports and display the progress of repairs. Each stage of a repair is included, from

booking-in to completion, via bespoke e-forms that feature mandatory and free-text fields.

Many of these fields feature drop-down menus for simpler completion. In addition, supplementary information, observations and photographs may be entered.