



Our Capabilities



Houghton International
Electro mechanical innovation

We have invested significantly to ensure we have the latest facilities and equipment to provide a comprehensive range of services, both in-house and on-site. By developing rigorous processes and carrying out the work in house we can ensure that we are in control of the most critical aspects of the repair process.



Facilities

We service our global customer base from our industry accredited facilities in the North East of the UK. With over 135,000 sq ft, ideally suited to the repair, maintenance and life extension of electrical rotating machines, we have the capability and capacity to deliver planned maintenance contracts and ad hoc emergency repairs.

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Equipment

Our facilities encompass a wide range of specialist equipment for end-to-end in-house capability, including:

- 50 tonne extraction press
- 50 tonne vertical press
- 300 tonne horizontal press
- 250 tonne extraction press
- MIG welding machine
- Automated TIG welding machines
- Automated undercutting machines
- Hexagon Arm for 3D measurement and scanning
- 3D CAD design capabilities
- Balancing machines - up to 10 tonne
- Craneage up to 40 tonne
- BTU band tension unit
- Vacuum Pressure Impregnation (VPI) - epoxy resin
- Burn off stove - 2.5m x 2m x 2m
- Large drying / curing oven - 3.5m x 2m x 3m
- 2.2m² 220°C drying / curing ovens (2 of)
- AWA 12kV Baker test unit (2 of)
- Baker DX series and 40kV power pack PP40 tester
- PJ surge tester (2 of)
- Tan δ tester
- Partial Discharge tester

Investment in latest machinery not only continually improves quality, it provides key critical specialist resource that improves automation, throughput and enhanced capacity.



Testing

Motor Testing Capabilities

We have invested significantly in test equipment to allow for a more comprehensive range of electrical and mechanical tests to be offered to our customers:

- Dynamic load testing
- 800 amps incoming supply this giving us the option of using a 3.3 / 6.6 or 11kV transformer to test a wide range of electro mechanical rotating machinery, using a 300 amps / 280 kVA regulator transformer
- AC inverter rated at 250kW 300 amps
- Baker test for windings up to 12kV which can run a complete cycle of tests to ensure the integrity of all motor windings
- AC regulator 0-415v 110 amps
- 2 DC supplies offering 360 excitation volts and 440 armature volts
- Motor alternator load test facility with DC voltages from 675v to 1050v
- AC resistive load bank to 60 kVA

We use Baker Test equipment to fully comply with IEC standards, testing for:

- Megger Insulation Resistance (IR)
- Polarisation index (PI)
- Resistance checks
- Continuity checks
- Baker surge tests
- Hi-pot / flash test

Significant investment has also been made in our site services test facilities. Our engineers are equipped to undertake an extensive range of tests which far exceed the traditional Megger test to diagnose a motor's condition.

Boasting full load testing capabilities, we perform such tests on electro mechanical assets to determine behaviour under peak load conditions. Can be facilitated via partner network as required.

Pump Testing Capabilities

Operating an array of specialised testing facilities, each pump is dynamically load tested, and a full performance test curve is provided prior to dispatch to confirm optimum performance and provide engineers with a datum to work from when installing the pump.

Our dedicated test areas include:

- Small/medium test rig: full load testing up to 500kW, flow up to 10,000 igpm, + 2,700 M3/Hr and heads up to 10,000 ft, 150 Bar and 2170 PSI
- Large test rig: bespoke testing facility for high flows that can be customised to specific customer requirements. We also partner with a local dry dock to test larger pumps, submersible and vertical, up to 11kV
- Net Positive Suction Head tests can be carried out in house and our hydrostatic pressure test rig can test up to 250 bar

HV Coil Testing Capabilities

All coils produced by us meet the relevant electrical standards, such as BS EN 60034, BS EN 50209 and IEEE 1553 & 1043 and our in-house testing facility offers the following routine testing procedures:

- Surge comparison or turn to turn test ($2U_N$) + 1000
- Tan δ / Tip Up
- Hi-pot (AC and DC flash) test ($2 U_N + 1000$)1.2
- Lamination test
- Partial Discharge test
- Voltage endurance test

We can also test to customers specification as required.

If you would like to arrange a visit to one of our facilities or to find out more information on our capabilities, please get in touch with us. We will be more than happy to assist.

Houghton International

Ronnie Mitten Works, Shields Road,
Newcastle upon Tyne, NE6 2YL, UK.

T: +44 (0)191 234 3000

E: info@houghton-international.com

W: www.houghton-international.com



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