



WHO WE ARE

Powertech's technical specialists are world class, ensuring that your inspection, test, commissioning and start-up requirements are thoroughly met and satisfied. Powertech specialists are highly trained, reliable and responsible. So when you require autonomous individuals with experience in all industry sectors you can count on us.

PEOPLE

To be the best at what we do, we strive to exceed our client's expectations.

Our services are of high value due to:

- **People:** Continuity, depth and quality of expertise provided by our field personnel.
- **Process:** Documenting and reporting via our highly evolved quality control systems.
- **Platform:** National network of teams and locations for rapid response and support.
- **Plant:** Extensive selection from the best brands of inspection and test equipment.



WHAT CAN POWERTECH DO TO IMPROVE THE RELIABILITY OF YOUR COMPANY'S ASSETS?



Powertech services offer Baseline, Time and Condition based maintenance audits including:

Condition Monitoring & Electrical testing:

- Machine Circuit Analysis (MCA – Ω , Z, L, C, \emptyset angle, I/F)
- Insulation Resistance based tests (IR, PI, SV)
- Tan Delta (DLA, DDF)
- Partial Discharge (PD)
- DC Hipot and ramp up tests
- Rotor RSO and Volt Drop tests
- Vibration Analysis (VA)
- On-line Power Quality Analysis (PQA)
- Visual exterior/interior inspections



WHAT CAN POWERTECH DO TO IMPROVE THE RELIABILITY OF YOUR COMPANY'S ASSETS?

CONTINUED

Mechanical maintenance including:

- LASER Alignment
- On-site balancing
- OEM Periodic maintenance inspections

Powertech utilises industry leading instrumentation such as the Doble™ Insulation Tester which has the advantage of access to a global test result database for fast comparison and accurate problem diagnosis. Our extensive range of testing systems enables us to ensure accurate identification of problems encountered in rotating machines such as:

- Stator insulation deterioration
- Winding contamination
- Cooling system difficulties
- Power supply issues

- Rotor defects
- Imbalance
- Misalignment
- Looseness
- Turn insulation problems
- Broken rotor bars
- Pump cavitation
- Vane related complications
- Bearing concerns

After the problem is found a root cause analysis is conducted and recommendations are made via comprehensive written reports to assist in planning maintenance and avoiding reoccurrences.

WHAT TEST FOR WHICH MACHINE?

Machine Type	Stator IR	Stator SV	Stator PI	Stator MCA	Stator DLA	Stator PD	Rotor IR	Rotor SV	Rotor PI	Online PQA	Vibration Analysis
LV AC & DC up to 1000V random-wound machines	•	•	–	•	–	–	•	•	–	•	•
From 1000 - 4000V form-wound machines	•	•	•	•	•	–	•	•	•	•*	•
Above 4000V form-wound machines	•	•	•	•	•	•	•	•	•	•*	•

* Via potential transformers.
Rotor insulation tests apply to wound rotors or armatures only.

All test results are added to our database and can be trended over time as this represents the most effective method of monitoring and maintaining your machines.