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news



Contents

[MDW 2016 Recap](#)

[ATP Motor Genie](#)

[New areas:
Pulp and Paper](#)

[Case Study](#)

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Welcome to the **apt Group's** Fourth Quarter Newsletter for 2016.

As we head towards the festive season, we recap the events from the last quarter.

For its 11th consecutive year, the [Motor Diagnostic Workshop](#) was held in Perth WA and some of the teachings for Static and Dynamic testing using the All-test Pro 5 has been provided as a technical guide.

Also, **NEW** from All-Test Pro, we are pleased to announce the [Motor Genie](#). This revolutionary tester goes far beyond what you can see with only a Meg-OHM-Meter and costs are comparable!

Further in this newsletter and from SPM Instrument, a focus on the [Pulp & Paper industry](#) is provided.

Following a commercial training session in Strängnäs (Sweden), it was soon evident, how the algorithms associated with the **unique HD Technologies** from SPM Instrument, could be applied to the most challenging applications within Pulp & Paper production and provide, vastly improved forewarning of failures!

Included in this section of the newsletter is an editorial and [Case Study](#).

We hope you enjoy our newsletter and would like to thank everyone who has supported us through 2016 to make it a success.

Kind regards,
Geoff Saper
apt Group Team

Feel free to send us your [feedback](#)

MDW 2016 - Recap

Training to improve Motor System Reliability

For its 11th consecutive year, the Motor Diagnostic Workshop (MDW) was held in Perth over 5 days in September. Split into Motor Circuit Analysis and Electrical Signature Analysis, this comprehensive, certified training course is designed to improve the Electrical Reliability of organisations' electrical machines.

International predictive maintenance specialist Bill Kruger, from All-Test Pro, emphasised the benefits and taught the functionality of the new All-Test Pro 5 (AT5) instrument.



Attendees came from mining, oil & gas and paper industries. But also, an equipment rental company joined our training, which we are pleased to say, now provides a rental service for the AT5.

The new Patented & Patent Pending analysis methods and measuring technologies are divided into two main testing types: **"STATIC"** and **"DYNAMIC"**.



Static testing, refers to the de-energised motor winding tests performed with the motor rotor in a stationary "static" position. It uses All-Test Pro's proven testing methods to measure the windings in all three phases at various pre-determined test frequencies.



Dynamic testing, refers to the de-energised motor tests which are performed while the squirrel cage rotor of an induction motor is manually rotated. The dynamic test sequentially performs tests on all three phases of the stator windings, and develops a "Test Signature" of both the rotor and the stator. These are then analysed to provide immediate results as to the condition of the rotor and the stator of three phase squirrel cage induction motors.

The AT5 will automatically **"ANALYSE"** the test result of each parameter and presents the result in a user friendly format. Analysis results include one of three possible levels, based on pre-set rules: **"OK"**, **"WARN"** or **"BAD"**. The user will always have the option to compare the new results with already preloaded or saved record in the memory, the **Test Value Static (TVS)**. Or to save the current test as a baseline reference test, the **Reference Value Static (RVS)**.

Any measured TVS can be trended over time or compared to its RVS, or the

RVS of another motor that is known to be in good condition and is exactly the same motor.

The MDW course is held around the same time each year and as such, we welcome expressions of interest for attending in 2017. We will keep you updated with the latest developments in electric motor diagnostics and the planning for next year's event.

Wish to find out more on our Motor Diagnostic Workshop or the AT5, [please contact us](#)



All-Test Pro Motor Genie New Product Launch

**MOTOR GENIE™ - The new standard to trouble shoot
your Electric A/C Motors.**

*With the **Motor Genie's** quick test results you'll instantly know if there is a problem! Electrical or mechanical, turn-to-turn fault or connection problems, internal or ground fault... The guessing is over! With Motor Genie trouble shooting has never been so easy, quick and efficient.*

Test electrical motors and connections at start up and avoid having to incur unnecessary labour and material costs. With the Motor Genie simply make sure electrical motors, connections and cables are working in top condition, by using the test result to create a professional bill of health report and avoid future warranty claims.



Motor Genie is also the perfect tool for quality assurance. Both new and stored spare motors can be tested quickly. Or test repaired motors to find irregularities or a possible faulty repair with different wire sizes, or wiring configuration. Save thousands of dollars and valuable time by catching faults before installing a new or repaired motor with the new Motor Genie.

This revolutionary tester goes far beyond what you can see with only a Meg-OHM-Meter!

Electrical Motor Testing*

	Ground Faults	Internal Winding Faults**	Open Connection	Contamination
MOTOR GENIE™	YES	YES	YES	YES
Meg-Ohm-Meter	YES	NO	NO	YES
Volt/Ohm Meter	NO	NO	YES	NO

*Common electrical testing instruments **Winding coil faults: turn-to-turn & coil-to-coil

Safe: de-energised testing

Easy: as easy to use as any Meg-ohm-meter or multimeter

Light: less than ½ kg, hand-held

Batteries: last for up to 10 hours of testing

Best Value: costs less than a good Meg-Ohm-Meter offering a quick return on your investment

What you will find with the MOTOR GENIE™

- Contaminated windings; Grease, dirt & liquids, corrosion
- Bad cables/connections; Broken/damaged, corroded or loose connections
- Insulation to ground faults; Choose 500 or 1000 volt test, read to 500 MΩ
- Phase unbalance; Z-unbalance = higher electric bills & shorter motor life
- Internal winding faults; Turn-to-turn, coil-to-coil, open windings continuity

For more info, [click here](#)



Pulp & Paper, SPM Instrument New industry focus and opportunities

In October 2016, SPM Instrument held a Commercial training session in Strängnäs, Sweden, focusing on the Pulp & Paper industry.

The knowledge and experience gained over many years was disseminated to those attending, including **apt Technology** and from the session, it was evident, SPM Instrument has a strong portfolio of unique condition monitoring measuring technologies and products for the Pulp and Paper industry.

Typically, ultra-slow and normal to fast machines can be successfully addressed, using revolutionary HD Technologies for Vibration monitoring. **These technologies NOW incorporate unique algorithms to clean the signals and provide superior forewarning of damage.**

Some of the applications addressed include:

- Chippers • Pressure screens • Wash press • Pressure feeders • Agitators • Pulp dryer • Refiners • Disk filters • Gearboxes • Wire presses • Vacuum pumps • Nip monitoring • Drying section drives and internal gears • Felt, stretch and alignment rolls • Calendar rolls • Drying and vacuum cylinders • Yankee cylinders • Yankee gearbox.

As part of the training we were fortunate to visit BillerudKorsnäs AB, a large cartonboard and liquid packaging board producer, with a capacity of 450 ktonnes/year. The mill used to have an 1100 point online system on the board/paper machine from a competitor, however this is now being upgraded to an Intellinova system from SPM Instrument and the portable instruments are being converted to SPM Diamonds. In the pulp plant, SPM Instrument have implemented an online installation on ultra-low RPM machinery.



In breaking news, Mondi has installed a new Intellinova online system from SPM Instrument for vibration monitoring, along with its winder and various auxiliary equipment. [Read more about this case.](#)

A concerted focus will now be placed on the Pulp & Paper industry, we will commence travel to **NZ next week and continue the approach with Australia in 2017**. As such, we welcome the opportunity to discuss and demonstrate our ability within your plant.



Following a long day at the office we proceeded to cook for the team in a true Master Chef style!



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