



# Electric Motor Testing Tip of the Week

revolutionizing *electrical* reliability

June 9, 2008

## Power Analysis Testing - Part Four

Stator = AC or DC Electrical Windings

When energized, the electrical windings in the stator, are what create the rotating electrical and magnetic fields in the electric motor. You can't have an efficient, long life out of an electric motor if these windings are compromised in any manner. In a three-phase induction motor, the windings have to have balanced resistance. They need to have good insulation, not only turn-to-turn, but coil-to-coil and phase-to-phase. Any instance where the windings are shorted will lead to inefficient performance and ultimately failure of the electric motor. Good predictive maintenance procedures, testing offline and online can catch potential winding problems while they are still correctable. With the Power Analysis test, you can review the current imbalances, impedance imbalances, coupled with the power factors to diagnose AC induction winding problems.

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You are invited to submit an Electric Motor Testing Tip of your own and receive a free PdMA mug or hat if we publish it! Contact Lou at 813-621-6463 ext. 126 or [lou@pdma.com](mailto:lou@pdma.com).

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