



Electric Motor Testing Tip of the Week

revolutionizing *electrical* reliability

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Six Methods of Rotor Evaluation Using MCEMAX

The six primary methods of rotor evaluation using the MCEMAX include pole-pass frequency (Fp) sideband, 5th harmonic, demodulated pole-pass frequency, rotor influence check (RIC), in-rush/start-up, and average inductance. We are going to detail each method and provide examples of each over this six part series of tips.

Part Two: Demodulated Pole-Pass Frequency

Performing a demodulation of the current and displaying it in the frequency domain provides a look into the electro-mechanical world of the motor. Peaks related to belts, fans, gears, etc..., once unavailable in the standard FFT are now present and accounted for in band alarm fashion through current demodulation. Research has found that the Fp, not the Fp sideband, identified in the demodulated spectrum is the most sensitive indication of developing rotor bar anomalies on large two-pole motors.

For more details on tracking two-pole motor rotor defects go to <http://www.pdma.com/PDF/CS0402.pdf>

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.