



A Leader in Electric Motor Testing

Tip Of The Week

May 7, 2018

Rotor Evaluation Using MCEMAX® - Part 3

Six independent methods of rotor evaluation can be used from the MCEMAX technology to analyze the condition of a squirrel cage AC induction motor: Pole-pass frequency (Fp) sidebands around line frequency, 5th harmonic, demodulated Fp frequency, Rotor Influence Check (RIC), In/Rush-Start/Up, and average inductance. Over the next six tips we will discuss each of these methods in detail and provide examples.

Part 3

The Rotor Influence Check (RIC) is a test performed with the motor de-energized. High resistance, cracked, or broken rotor bars and end rings will cause a non-symmetric reflected impedance onto the stator windings resulting in elevated inductance levels for the stator phase located over the rotor fault. Rotating the rotor in calculated increments and retesting the inductance will present a clear image of the residual flux and reflected impedance coming from the rotor. Variations of inductance indicative of rotor defects will affect all phases of the stator similarly allowing you to isolate the anomaly to the rotor.

To learn more about the RIC watch a case study on the PdMA YouTube Channel at:

<https://www.youtube.com/watch?v=P4XIYg-695A>

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. 166 or lou@pdma.com.

Copyright 2018 PdMA® Corporation. All rights reserved. The PdMA Tip of the Week is produced by PdMA. PdMA shall not be liable for any errors or delays in the content, or for any actions taken in reliance thereon.