PdMA® CORPORATION A Leader in Electric Motor Testing

Tip Of The Week

July 24, 2017

Three Phase Resistance Imbalance Warning

The precision in motor manufacturing today, especially in large motors, is apparent when you look at the comparison of phase resistance. It is not unusual to see a large three-phase induction motor with phase resistances perfectly balanced or close, with imbalances calculating well below 0.1%. This being the case, the balance of resistance measurement can be a super sensitive indicator of the changing condition of the motor windings.

Commonly, resistance imbalance is utilized in the analysis and troubleshooting of the power circuit fault zone for high resistance connections. However, strong consideration should be given to establishing balance of resistance caution and alarm set points for the Change From Baseline for analysis of the stator fault zone as well. The adjustable default balance of resistance warning settings for new assets being added to the MCEGold software are caution at 50% increase and alarm at 100% increase.

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.