



Electric Motor Testing Tip of the Week

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Testing Synchronous Motor Rotors

When performing resistance-to-ground checks on the rotor assembly of a Synchronous motor, there are important factors to consider:

Is the motor self-excited, or does the excitation come from an external source?

- If the motor is self-excited, we must ensure the rectifier circuit is completely isolated from the rotor circuit to be tested. Otherwise, the rectifier circuit could invalidate the measurement.
- If the rotor receives the excitation voltage from an external source, then we should lift ALL brushes, and test the rotor directly from the slip rings.
- In either case, connect the ground clip directly on the rotor shaft whenever possible.

What is the excitation voltage?

- It is important to know what the excitation voltage is on the specific machine to be tested. The excitation voltage is normally much lower than the rated operating AC voltage of the machine. Therefore, the testing voltage used on the rotor should comply with the testing standards found in the IEEE 43-2000 for the excitation voltage.

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.