
March 4, 2013

A Smart Approach to AC Drop Testing

The AC drop test is a well accepted tool utilized by maintenance technicians to quantitatively assess the health of the DC windings on the field of a synchronous motor. The drop test is performed by connecting an AC voltage across the entire synchronous field and measuring the voltage drop across each field pole independently. If each field pole is dropping the same, or near the same voltage then the field poles can be considered in good condition. If one or more field poles drops less voltage, they may have shorted turns. Due to the intrusive and time consuming nature of the drop test, the trending of the field pole inductance has become a popular alternative to the AC drop test. A downward trend in field inductance will easily identify a shorted condition on the field winding. Once a reduced condition is identified, a decision to use an AC drop test to isolate the failing pole piece becomes far easier to make.

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.

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