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Tip Of The Week

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Inductance Ranges

Different winding configurations, core length and different sizes of motors or generators can mean very different values of winding inductance. Take a DC Motor as an example. The series windings consist of a larger diameter wire with fewer loops around each pole, and the shunt windings are made up of much smaller diameter wire with many turns around each pole. To optimize the inductance measurement of these two fields your MCE test equipment will apply different test frequencies. For the many turns, but smaller wire of the shunt field a lower frequency (300Hz) test signal is applied. For the larger, but fewer turns of the series field a higher frequency (1200Hz) test signal is applied. Of course, not every motor manufacturer follows the same design and the frequency selected by your test equipment may need to be changed if you find yourself outside the inductance measurement range of the default frequency. In this situation remember that you are able to change the test signal frequency of your MCE as necessary to modify the inductance range of the MCE test equipment.

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.