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How Do I Test Large DC Armature Leads?

As DC motors get larger the circular mils of cable supplying the armature circuit can grow to a size that does not fit in the standard AC/DC current probe. In many cases you have multiple cables attached to a bus bar supplying power to the DC armature and a single DC current probe does not exist (that we are aware of) to encompass this type of configuration. Before you throw up the white flag and opt to not perform a current capture, consider the flexible Rogowski Coil. As long as the supply to the armature is from a DC drive, which is a rectified DC signal, the Rogowski Coil will be able to provide a qualitative analysis of the acquired DC current signal. The minimum frequency response of a Rogowski Coil may be 5-10Hz. The normal full wave rectified DC signal will carry a ripple frequency of 360Hz. This is more than enough variation in current for the Rogowski Coil to acquire a clear indication of the output performance of the DC drive as well as the performance of the DC motor.

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.