



A Leader in Electric Motor Testing

Tip Of The Week

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Motor Space Heaters

Depending on the environment and criticality of your electric motor, space heaters should be strongly considered if you want to ensure maximum reliability and expected motor life. When a motor is secured (de-energized) there is an initial increase in temperature due to the loss of cooling air. However, very quickly after shutdown the temperature of the motor windings will start to drop. Once the temperature falls below the dew point, air moisture will condensate on the windings and machined surfaces creating a conductive path for current to ground. This drop in resistance to ground due to the surface moisture contamination can cause a low state of reliability for the next startup and increase the chance of a failure. When selecting a space heater, a simple calculation can give you a ball park estimate for power requirements to remain above the dew point.

$H = DL/35$

Where:

H = Heater size in kW

D = Diameter in Feet

L = Length in Feet (between end bell centers)

To see the results of excessive moisture on a 2000HP electric motor visit the PdMA YouTube Channel at:

<https://www.youtube.com/watch?v=9SG3INm8u8w>

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.

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