PdMA® CORPORATION A Leader in Electric Motor Testing

# Tip Of The Week

**May 11, 2020**

## Saturday Motor Failure!

Why do motors wait until Saturday to fail? We may never know, but motor failure and fun day Saturday seem to be synchronized. And the Saturday failures are never quick recovery issues either. Imagine this scenario. At 2:30 p.m. on the Monday following a large wound rotor motor failure, the crane was finally in place and the damaged motor was lifted off the deck in preparation for replacement with the spare motor. By 7:00 p.m., the coupling had been removed from the failed motor and was being installed on the new motor. At 12:00 midnight, the motor was aligned, wired up for high voltage, and ready to start.

The motor growled, blew a fuse, and appeared as if it was trying to turn in reverse of the desired direction. The rotation was changed and another start was attempted. Another $1000 fuse blew in a different phase. The resistor bank and relays were op- tested satisfactory. The rotation was reversed again for a third start, resulting in a growl, followed by what appeared to be a near start, followed by another $1000 fuse blowing in phase B.

Many hours of effort and lost production could have been prevented if we just applied a little bit of MCEMAX® acceptance testing on the replacement motor and identified a simple rewind flaw in the coil placement.

To find out more about the root cause of the motor failure, view the case study on our PdMA YouTube Channel at: https://www.youtube.com/watch?v=Hm4X6wrlAFQ

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.