PdMA® CORPORATION A Leader in Electric Motor Testing

Tip Of The Week

March 26, 2018

Machine Train for March - Part 3 Pumps/Fans

Continuing the focus on the machine train analysis tools of the EMAX Current Demodulation technology, this week we will discuss pumps and fans. Remember we are extracting machine train data from the current being supplied to the stator windings, which are not physically connected to the shaft line components with the exception of minor contact from the housing through the bearings. So, we are relying on the load changes felt by the shaft, and therefore the rotor magnetic field, to be transferred through the air gap to the stator magnetic field. On an AC Induction motor the stator magnetic field and the rotor magnetic field are not turning at the same rate and this is referred to as slip. This slip, in the form of a pole-passing frequency (Fp) becomes part of the calculation to determine which frequency range on the EMAX Current Demodulation technology spectrum relates to the pumps and fans.

To see a case study using EMAX Current Demodulation to identify machine train anomalies visit our YouTube channel at: www.youtube.com/watch?v=P_ghttYMqqc

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.