

792 – Digitally Enabled Predictive Maintenance Solution for Electric Motors

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Abstract: Advances in connectivity solutions, low-cost wireless sensors and cloud storage have made wider predictive maintenance for low voltage motor driven systems viable. Monitoring device with multi-parameter sensing functionality help monitor and trend wear of rotating machine components, and identify factors that contribute to such degradation. When compared to just monitoring overall vibration and temperature, capturing leakage flux and acoustic signals, and using advanced analytical methods add more to the detectability of likely faults. However present-day technology and solutions are not without challenges. This paper brings out the deployment of a wireless smart sensor-based solution as an integrated predictive maintenance system with remote monitoring for electrical motors at a Chemical plant. Application of maintenance support tools that use information from monitored assets to address maintenance needs in the short to medium term are also discussed. Successes of this approach have resulted to a 100% reduction in motor downtime and also helped with identification of process related issues, resulting in increased reliability and OEE.