

UNEXPECTED DOWN-TIME IS DIMINISHING AT HP PELZER PIMSA

HP Pelzer Pimsa, a joint venture of HP Chemie Pelzer GmbH and a supplier of acoustic solutions and trim parts for automobile industry, reduced unexpected down-time to less than 1% through effective implementation of predictive maintenance and condition monitoring concept. The performance of the maintenance team received recognition for their accomplishment within the HP Pelzer Group.

Artesis' condition monitoring product, Motor Condition Monitor (MCM) also helped the maintenance team in their accomplishment. MCM units are integrated to a maintenance management software developed by Tacosoft company and are used to provide early warning of developing faults at pumps, compressors and water jet equipment. Using only voltage and current signals, MCM devices continuously monitor critical equipment driven by electrical motors and provide advanced warnings up to three months before the failure of equipment. Using the warnings obtained by MCM, the maintenance management program issues a work order for the maintenance team.

The company started using MCM devices as an integral part of the maintenance management software in 2004 in two of their plants.. The company has reduced their unexpected downtime to 0.8% in 2005. The company continued to reduce its target value for unexpected downtime for 2006 consistent with the observed performance in the first three months. The implementation of the effective predictive maintenance program by the maintenance team has also been instrumental in meeting ISO TS 16949 Quality certificate as well as the Q1 supplier certificate given by Ford and A class supplier certificate by Mercedes.

The primary function of MCM is to provide early warning and diagnostics of progressively deteriorating machine and process conditions to prevent unplanned downtime, and improve productivity. The patented MCM core technology stems from a decade-long research effort, which previously has been applied in the U.S. to the Space Shuttle Main Engine, helicopter engines and gas turbines. MCM is an inexpensive device yielding accurate maintenance decision information that can be used by low or semi-skilled personnel. Therefore, it eliminates the shortcomings of both vibration and current signature analysis systems.

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“I no longer get phone calls in the evenings”

Rüstem Yıldız, Maintenance Manager

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A CASE STUDY AT PELZER PIMSA

INDUSTRY	: AUTOMOTIVE PARTS OEM
COMPANY	: HP PELZER PIMSA OTOMOTIV A.
APPLICATION	: PUMPS, PRESSES, COMPRESSORS, WATERJET
MCM SYSTEM	: 20 PIECES MCM-LV
REMOTE MONITORING SYSTEM	: MCMSCADA, LAN
APPLICATION PURPOSE	: EARLY FAULT DETECTION PROCESS MONITORING
CASE	: DEFECTIVE CONTACTOR



- As the MCM gave “Watch Line” alarm, the parameters of the motor in MCMScada was analyzed. The maintenance team noticed that one of the contacts belonging to the contactor was defective, which was replaced and the problem was resolved.

- Some of the problems that can be detected by MCM with the “Watch Line” alarm are: Capacitor problems, harmonics, isolation problem of the cables, motor connector or terminal slackness, contactor problems, etc.

