

TPM Maintenance Training: I Bet an Operator Can Do This Inspection!

Torbjörn Idhammar VP and Partner, IDCON, Inc., a maintenance management consulting and training company.

The industry is well aware of the impact of preventive maintenance (regardless if it is performed by an operator in a tpm maintenance effort or an hourly maintenance person). With downward cost and price pressure and aging equipment, many plants can barely keep fixing what breaks let alone perform simple equipment inspections with overtime-maxed maintenance people. The solution is clear. Break the vicious circle of reactive maintenance.

An obvious resource is to use early detection of problems by an operator trained in tpm maintenance. Who can better detect subtle equipment changes? Think about your automobile. Except scheduled maintenance, the automobile operator initiates 98% of shop visits. Most automobile operators also understand that finding problems early equals major savings.

Michael Lippig is Business Development Manager of IDCON INC.,

When recommending the concept of operator inspections in tpm maintenance format, a wall of objections and obstacles arises. Unions may claim this will eliminate work for their maintenance members although operators will be doing nothing more than inspections and what many union agreements already allow.

Further information is available by contacting info@idcon.com

Another common objection from maintenance people, management personnel, and operators is that operators do not know how to do this. The tpm maintenance tasks operators should perform are simple, common-sense checks. Many operators can do such inspection without training. The fact that many operators maintain their vehicles and home means they are clearly capable of learning and performing complex maintenance tasks.

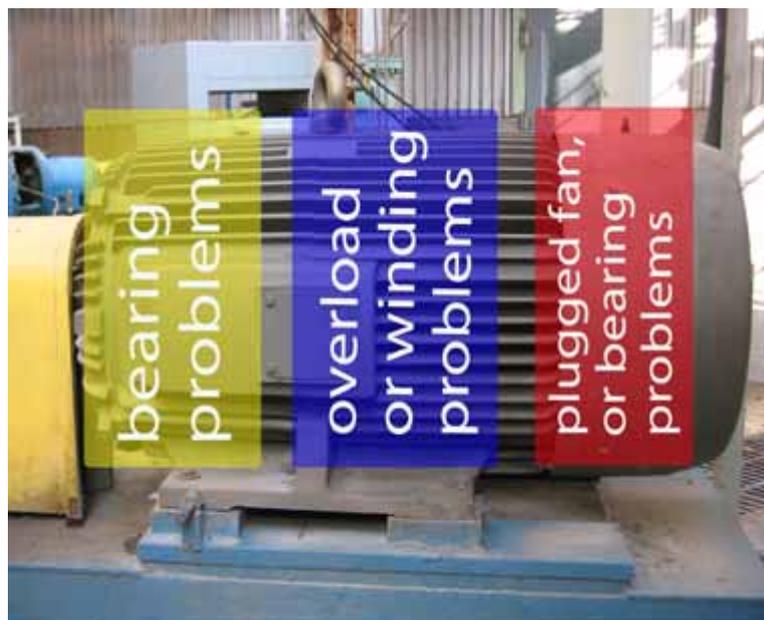


Figure 1. AC motor heat diagnostic pattern.

Fig. 1

For example, ask an operator to inspect the AC motors in his area according to pre-set frequency and order as **Fig. 1** shows. If the temperature is high near the front, a bearing problem probably exists. If the temperature is high in the middle, the difficulty is undoubtedly a winding problem or overload. If the temperature is high at the back, airflow or bearing problems may exist. ***I bet an operator can do this!***

Many operators are already recording operating parameters such as temperature and pressure. Typically, they file these. Perhaps, a supervisor may examine them another day. This is often mere “busy work.” Teaching the “recorder” to interpret what he sees and then initiate action will provide many valuable front line observers, save uptime, and direct



maintenance to the “hotspots” before they turn catastrophic. Marking gauges with the normal operating range and using graphical, eighth-grade level instructions showing the “recorder” why, what, and how to inspect makes the job of an operator more interesting and truly empower him to impact plant performance. ***I bet an operator can do this!***

Most plants have couplings of the “tire” type, see **Fig. 2**. A simple inspection of a “tire” coupling is to visually inspect it for loose bolts, tears in the tire material, and worn keyways.

I bet an operator can do this!

Managers need to decide if operator inspections are the proper action. If so, do not allow attitudes and objections to stand in the way. Forge ahead, make the plans, use pictorial training and reference material, train the operators, and institute the procedures.

Examples of training material for operators are available at

<http://www.idcon.com/condition-monitoring-books.htm> This will definitely be a win-win situation for the operators, maintenance personnel, and the plant. ***I bet you can do this!***