

Reduce Equipment Costs with Predictive Maintenance

“A more robust and understood reliability and maintainability process can reduce costs and improve competitiveness in companies of all types.”

- Klaus M. Blache, Ph.D.,
University of Tennessee,
Reliability and
Maintainability Center

What if...

- you could achieve profitability goals by assessing machinery health and improving reliability?
- to predict machine failures, you relied on one powerful tool rather than multiple applications?
- your staff could stop reacting to emergencies and be more predictive?

A machine is ready to go down — and take the unit down with it. When? Maybe you will get called back to work from home tonight. Maybe the machine will fail during a profitable process run. But even if you knew right now which machine was going to malfunction, without diagnostic data you could not accurately anticipate the cause: bearings, gears, or some other critical component.

Don't accept surprise production interruptions. Anticipate problems and be prepared. Use a predictive maintenance process called route-based vibration analysis to anticipate machinery problems and lead your facility toward increased availability.

FAILING TO REACH COST AND RELIABILITY GOALS

As operational costs increase, maintenance and operations staff are in the harsh spotlight to continuously improve efficiency and cut costs. In what ways are you overlooking potential savings in spare-parts planning, updated maintenance practices, and avoidance of unplanned failure? With the expense of an inopportune machine failure, even a single emergency is too many.



In addition, analysis of work orders show that approximately 80 percent of maintenance expense goes to maintain 20 percent of facility assets. Studies show that predictive maintenance (PdM) programs, such as route-based vibration analysis, can save 12 to 18% of maintenance dollars.

UNSURE OF CHOOSING AMONG OPTIONS

Your facility uses a wide variety of machines from many suppliers, yet your maintenance solution must apply to all of them, be flexible, and grow with unanticipated requirements. How do you choose the most effective solution: one that will be approved by management and purchasing? You need a supplier you can trust, who will be around for the long-term, and will help train you and your staff on how to successfully implement a program.

UNPREPARED FOR CHANGE

The status quo can lull you into believing the payback for changing maintenance processes is not worthwhile. But if you have no visibility to machinery problems and no data to support effective operations changes, you are merely reacting to immediate emergencies instead of setting the foundation for long-term success.

Still, change often appears painful — and it impacts multiple groups in your plant. You can't implement change without the buy-in from these groups — so you need proof that a new program will deliver measurable return on investment, is easily implemented, and will make life easier.

ROUTE-BASED VIBRATION ANALYSIS

COST-EFFECTIVE MAINTENANCE AND INCREASED RELIABILITY

Effective route-based vibration analysis programs have demonstrated significant return on investment by reducing maintenance costs and delivering diagnostics to prioritize and target maintenance work. With a predictive vibration program, you can acquire spares in a timely, cost-effective manner, and schedule maintenance during times that do not negatively impact production.

Emerson's CSI 2140 Machinery Health Analyzer is designed to deliver the machinery health data needed to enable you to make informed, targeted maintenance decisions that will improve the reliability of your equipment.



“We are definitely saving maintenance dollars as a result of the extended mean time between repairs (MTBR) on rotating assets.”

Michael Popelka,
Reliability Engineer,
Pine Bend Refinery

COMPREHENSIVE VIEW OF MACHINERY HEALTH

The CSI 2140 and AMS Suite predictive maintenance software provide advanced diagnostics to analyze and determine machinery problems. The combination allows you to go beyond basic vibration analysis and incorporate additional capabilities to gain a more comprehensive diagnosis of potential issues. You won't need a tool box full of additional hardware; instead, you can perform a variety of diagnostic tests with a single analyzer. Emerson's experienced support engineers can help you ensure success and support you all the way.

In addition, diagnostic data aids intelligent analysis that can help improve machinery operation, the overall process, and your returns. In fact, product quality is the overwhelming reason facilities begin predictive maintenance programs.

EASY TO IMPLEMENT

With a predictive vibration analysis program, your team becomes more efficient because you set priorities better and perform only the maintenance that is required. The CSI 2140 delivers easily understood, color-coded visuals to simplify analysis and troubleshooting. In addition, trend data is easily viewed to assess developing trouble in machines to plan and prioritize corrective maintenance. And for those few troublesome machines where you don't feel like you are experts, Emerson's remote analysis services experts will analyze your diagnostics and make recommendations for improved performance.

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