Vibration Detection for a Safe, Reliable Plant Floor

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There is no such thing as a vibration free machine," says Steve Matthews, business manager of VibrAlign's service company, PdM Solutions, Inc. Rotor unbalance, sheave misalignment, worn bearings, loose bolts, and bearing lubrication issues can affect every machine on the plant floor. And when they do, costly and dangerous failures can result. Monitoring critical rotating machinery can help mitigate the risk, allowing maintenance technicians to avoid unnecessary and unscheduled downtime by getting in front of an issue before it becomes a problem.

Reliable Vibration Detection

A good vibration analysis program starts with an experienced and skilled vibration analyst. "Without this, all other considerations are not worth discussing," says Matthews. "The best tool is a good analyst."

A good analyst means a technician who is well versed in vibration monitoring: someone who is able to recognize fault patterns of machinery. "What is really important for predictive programs to be successful is to know when the levels have gone high enough to warrant a maintenance action," adds Matthews. The skill to determine "the precise nature of detected vibration, the appropriate corrective action, and when to take that action (severity) can take several years to develop." Taking action too soon due to the early detection of a bearing fault could lead to unnecessarily replacing a part that could have lasted for years more. Taking action too late could lead to a costly and unexpected machine shutdown.

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