

Johns Manville Expands Production Capacity with New Approach to Machinery Health™ Management

RESULTS

- 44 hours downtime avoided in first 6 months
- 50% increase in machinery mean time between failures
- 43% reduction in mechanical emergency maintenance
- 260% program ROI in first 6 months



APPLICATION

Manufacturing of industrial roofing and fiberglass insulation products.

CUSTOMER

Johns Manville is a 145 year old business owned by Berkshire Hathaway. The Etowah, Tennessee plant is a part of the Engineered Products Division and has been in operation since 1978.

CHALLENGE

Machine availability in the plant is critical to maintaining Johns Manville's status as the construction industry's low cost supplier and satisfying customer quality requirements. Unfortunately the vibration analysis program became ineffective as a result of competitive pressures to reduce personnel, creating a slow shift to reactive maintenance. The machinery health program required a new model: one without additional head-count and large expenditures. Key business objectives were to decrease emergency maintenance to less than 10%, increase throughput by increasing machine availability, and reduce maintenance costs.

SOLUTION

Johns Manville partnered with Emerson to implement a new vibration monitoring program. Emerson provided advanced AMS vibration monitoring hardware, optimized data collection routes and databases, and installed the AMS Machinery Manager Software.

“Our partnership with Emerson has resulted in lowering costs while increasing reliability and efficiency. Emerson has helped us realize our business goals and operate with increased confidence.”

Perry Randle
Predictive Maintenance Leader

Johns Manville created a full-time position for a Predictive Maintenance Leader trained in using Emerson technology to inspect and collect data from selected machines. The collected information is sent via the internet to Emerson machinery health analysts for monthly analysis and reporting. Emerson and Johns Manville personnel work closely together to prioritize findings, assign recommended corrective actions, and track program costs and benefits.

Eight major problems were diagnosed within the first six months of the program's start in early 2002, avoiding 44 hours of potential forced downtime and saving countless dollars. Over the first 18 months of the program, emergency mechanical maintenance dropped from 14% to 8% and mean time between failure for the monitored equipment increased by 50%. These results translated into increased plant availability, enhanced customer product delivery, additional revenue, and reduced overall production costs.

The new program was started in a critical area of the plant. The initial benefits are providing the justification to expand the program into other areas. Gradually, as expertise develops, the analysis work will be shifted to the Johns Manville staff and the machinery health program will be extended throughout the plant.

“The success of the program became immediately obvious. Preventive maintenance activity, particularly related to major roll bearings, was eliminated. This freed up man hours during precious planned maintenance outages, further improving line reliability.”

Paul Kessler
Engineering Manager

Emerson

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