

# Greif Packaging Achieves Cost Reductions with Emerson Reliability Program

## RESULTS

- \$275,000 saved by avoiding production losses
- Cost recovered in less than 2 months for updated reliability program



## APPLICATION

Two large paper machines with hundreds of bearings, along with other auxiliary equipment.

## CUSTOMER

Greif Inc., headquartered in Delaware, Ohio, is a world leader in industrial packaging products and services. With over 160 operating locations in more than 45 countries, Greif serves local, national, and multinational customers. The Greif plant in Massillon, Ohio has been producing paper for corrugated boxes since the 1960s. Its 100 employees turn out 480 tons per day when both paper machines are operating.

## CHALLENGE

Keeping two old paper machines in the 40-plus year old plant running while operating 24/7 with a lean staff is a major challenge and is the primary responsibility of Jon Wonsettler, Electrical and Instrumentation Engineer.

Historically, an average of about two bearing failures per month have resulted in the shutdown of production on a machine. The maintenance staff scrambles to make repairs, even coming into the plant from home at night if necessary. Although repairs are often completed within three hours, the cost in terms of lost production is more than \$25,000 per incident.

When lost production costs were presented to management, they realized that it was time to upgrade the machinery maintenance program to something more effective than the preventive measures being used.

***“We have not had one single unexpected bearing failure since the vibration monitoring program was initiated.”***

**Jon Wonsettler**  
Electrical and Instrumentation Engineer,  
Greif Inc.

### SOLUTION

Sales people from several reliability technology companies were invited to demonstrate their programs. Following the presentations, the management team at the Massillon plant selected Emerson's Machinery Health Management reliability program.

"We bought the CSI 2130 Machinery Health™ Analyzer and AMS Machinery Manager software for a multitude of reasons," says Wonsettler. "We have not had one single unexpected bearing failure since the vibration monitoring program was initiated."

AMS Machinery Manager, which can track costs and savings including labor, parts, and lost production, identified a savings of more than \$270,000 in the first five months. During this period, advanced failure warnings enabled plant personnel to replace thirteen faulty spherical bearings before they failed.

"We have not had one single unexpected bearing failure since the vibration monitoring program was initiated," says Wonsettler, "so we recovered more than five times the cost of the system in just five months. The system actually paid for itself with the first two bad bearings it identified."

AMS Machinery Manager makes it easy to compare the bearing characteristics with the collected vibration data. "This spits out the exact fault frequencies I'm looking for. When I compare my spectrum with the bearing data, if the fault lines up I know just what is wrong."

Most of this plant is now covered by the Emerson reliability program. "I've got about 60 percent of the mill on a regular route so far," says Wonsettler. "In the next six to eight months, we will have it 100 percent covered."

This program continues to deliver results. Since implementing predictive maintenance in May, 2008, Greif Inc. has saved more than \$275,000 in lost production, a figure that increases month after month with no bearing failures to cause machine downtime.



***"Overall equipment effectiveness is significantly better. It just boils down to making more paper based on fewer failures."***

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