

AssetScan Vibration Monitor Helps ATEK Metal Technologies Predict Maintenance Needs

ATEK Metal Technologies

For more than 50 years, ATEK Metals Technologies has delivered superior aluminum castings that meet the specifications of the world's most demanding industries, from motorsports and recreation to transportation and industrial markets. Each part is an example of the highest quality in design, casting, machining and finishing, crafted to the most demanding specifications, repeated time after time.



Application:

Bearing Fault Monitoring

Market:

Condition Monitoring

Repairing something is usually more cost effective than replacing it, especially if it fails suddenly, bringing your facility to a halt. Unplanned equipment downtime can mean lost revenue and productivity, two things heavy asset industries can't afford to lose. ATEK Metal Technologies, a technology-leading manufacturer of aluminum castings in New Hampton, IA, knows this well as it produces as many as 4,000 castings a day.

Problem

ATEK Metal Technologies' most critical assets include three large compressors that provide compressed air to its 80,000 square foot plant. Like most manufacturers, ATEK Metal Technologies conducts periodic maintenance on the equipment. However, the motor of one of its 200 horse power compressors failed about a year ago. Although the plant can operate with only two compressors, it's not ideal.

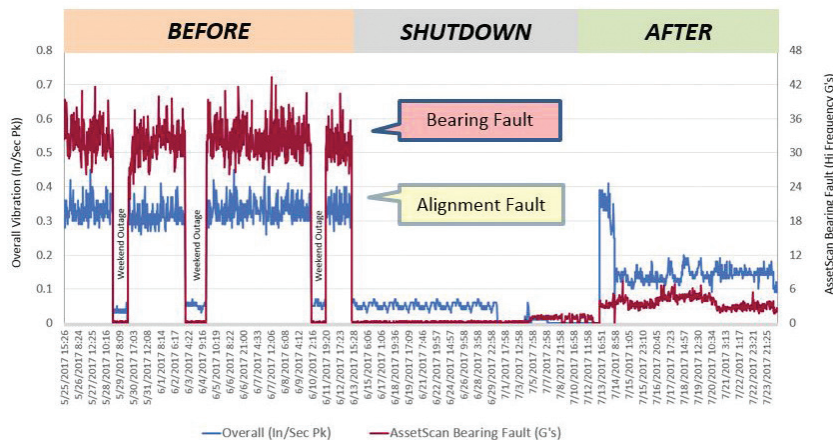
The 200 HP compressor required an expensive repair including expediting the purchase of a new motor and expediting its installation. Similarly, a make-up air ventilation fan that supplies fresh air to the plant from the outside also experienced significant damage due to a bearing failure.

"The failed bearing went undetected until significant damage was also done to the blower wheel and housing. In addition to making working conditions in the plant uncomfortable, the air makeup unit required \$30,000 in repairs." said Tom Christie, President, ATEK Metal Technologies.

Solution

ATEK Metals Technologies installed the AssetScan Vibration Monitor on its 300 HP plant air compressor and immediately detected a bearing and alignment problem. The AssetScan Vibration Monitor allows companies to monitor their plant's critical rotating equipment, including motors, fans and pumps, from any location, all on one convenient dashboard. It sends alerts by text and email at the first sign of trouble allowing time to plan and mitigate the impending risk. Additionally, because of its portability enabled by battery power, cellular wireless communications and magnetic sensor connection, the AssetScan Vibration Monitor can easily be moved to other assets.

300HP Plant Air Screw Compressor (2 Faults)



Results

Thanks to the warning signs it received from the AssetScan Vibration Monitor, ATEK Metal Technologies was able to proactively use a back-up compressor while it took the 300 horsepower compressor offline for repairs, during a planned outage over the 4th of July.

The AssetScan Vibration Monitor indicated a high reading on the inboard motor housing of the 300 HP screw compressor. A subsequent inspection and repair confirmed a defect on one of the roller elements of the bearing. The monitor also revealed that the bearing lacked lubrication.

Without the AssetScan Vibration Monitor, the compressor would have ultimately failed, requiring a replacement of the motor which would have cost the company approximately \$27,000.

In addition to the collateral damage to the motor, the failure would have diminished ATEK Metal Technologies' compressed air capacity, forcing the company to run at a lower rate, potentially impacting its customers.

"I really like the portability of this product so that we can use it for monitoring critical equipment in a variety of locations without the expense and effort of hard-wiring in place," added Christie. "It is particularly helpful in monitoring remote rotating assets that can be out of sight, out of mind."

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