

AssetScan Provides Cloud-Based Connectivity for Bearing Fault Monitoring

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

Problem

Typical of any foundry, the ATEK facility contains hundreds of motor driven machines, from hydraulic pumps, oven air circulators, HVAC equipment, to high horsepower compressors providing the necessary air flow for the myriad uses. Each motor driven asset is essential to keeping the plant running safely and efficiently. However, equipment breakdowns are inevitable, and while they can be remedied with spare motors and parts, the cost of lost productivity is not recoverable. Avoiding unplanned downtime was an improvement goal at ATEK Metal Technologies.

“When a breakdown occurs, it stops our production and costs us thousands of dollars,” said Joel Stravers, Plant Superintendent, ATEK Metal Technologies. **“We wanted to find a solution to identify problems before they became an issue in order to prevent downtime and save costs.”**

Solution

In the fall of 2016, ATEK Metal Technologies participated in a field trial of a new solution developed by its sister company, ATEK Access Technologies – the AssetScan Bearing Fault Advisor. The AssetScan Bearing Fault Advisor solution has an AssetScan monitor at its heart, performing the power management, data collection and cellular telemetry. The AssetScan monitor utilizes an industrial accelerometer connected to a vibration transmitter with outputs that are read, logged and transmitted to the ATEK Intelligence Platform. The entire solution is battery powered for immediate installation, making it a cost-effective solution that is simple to deploy.

ATEK Metal Technologies installed the AssetScan BFA monitor on its 300 horsepower air compressor to diagnose a vibration issue. The monitor indicated a high reading on the inboard motor housing. A subsequent inspection found a failing bearing on the inboard side of the motor.

“The AssetScan BFA solution showed us real-time data of what was happening, which allowed us to quickly identify the issue before the compressor failed,” said Stravers. “Identifying the failing bearing before it became a breakdown allowed us to repair the motor and get it back on line with a minimal disruption to operations.”

Results

By using the AssetScan solution to identify the compressor’s problem, ATEK Metal Technologies did not have to do a full replacement, saving the company approximately \$5,000 to \$7,000.

“Without the AssetScan solution, the motor would have run until failure, bringing our production to a halt,” said Stravers. “Thanks to AssetScan, we were able to avoid replacing the motor, which would have taken between two to three weeks.”

In addition to preventing downtime, the AssetScan solution also eliminates the need to prematurely replace a part that may not have reached the end of its life cycle.

“Before using the AssetScan solution, we would perform preventative maintenance on our equipment by replacing certain parts before they broke down,” said Stravers. “We had no way of knowing how much life a part had left, but with AssetScan installed, we can identify an issue and make any necessary repairs without incurring the cost to replace the part.”

Although ATEK Metal Technologies is still doing preventative maintenance on its equipment, such as cleaning it and adding lubrication, the AssetScan solution is leading the company toward predictive maintenance.

“Adding the AssetScan solution has allowed us to create an overall better maintenance program because we can move the monitor to multiple pieces of equipment,” added Stravers. “This will help us identify a problem before it becomes a major issue, preventing downtime and reducing our overall costs.”

ATEK Metal Technologies recently ordered a second AssetScan solution and is currently in the process of identifying other equipment to monitor. ATEK plans to develop a time frame of what equipment will be monitored monthly depending on equipment value.

203-0024-000 Rev. A 4/17

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