

Flow Sensor Saves Costs and Reduces Maintenance in Robotic Welding Application

RESULTS

- Analytics showing loss of compressed air during downtime.
- Maintenance savings totaling over \$10,000 per month.
- Energy savings totaling over \$200,000 per year.



APPLICATION

Increasing air monitoring capabilities in an automated robotic welding system.

CUSTOMER

A global leader in automotive manufacturing. The company, based in Canada, provides various structural components through welding and stamping processes.

CHALLENGE

A large automotive company had no way of determining how much air the pneumatic components in its robotic welding cells were losing during downtime. In addition to obtaining this data, the company wanted to compare the cycle rates for each shift based on efficiencies per 100 parts produced. Although it was using handheld leak detectors — a traditional way of monitoring pneumatic systems for air loss — the company wanted an automated solution that could reduce the amount of downtime during peak production times.

SOLUTION

To meet these requirements, Emerson technical experts recommended the AVENTICS™ Series AF2 Sensor with I/O link capabilities. This Industrial Internet of Things (IIoT)-ready device monitors air consumption in pneumatic systems, automatically forwards the data to the control via the I/O link and enables rapid intervention in the event of a detected leak.

Thanks to the AF2 Sensor, the automotive company has saved \$10,000 per month in maintenance costs, as well as \$200,000 per year in energy.

Delivering a total solutions package, Emerson experts provided application assistance by determining the best installation location for the sensor, which ended up being on a new piece of equipment that had not yet started full production. Experts also established the appropriate data tables that the company could use to capture data. Using these data tables for reference, the company set up the HDMI channels for data collection. Once it was gathered, data was sent to the information technology (IT) department for further analytics.

Thanks to the integration of the AF2 Sensor, the automotive company soon had data showing the exact amount of compressed air lost during production downtime, enabling it to further assess and improve its robotic welding systems. Thanks to this information, the company has saved \$10,000 per month in maintenance costs, as well as \$200,000 per year in energy.

The company has since included the AF2 into the build specifications for new OEM equipment. It is also currently compiling these valuable energy analytics to present to government agencies to qualify for energy rebates.

Emerson Automation Solutions
1953 Mercer Road
Lexington, KY 40511
+ 1 859-254-8031
us.AVENTICS@Emerson.com

The Emerson logo is a trademark and service mark of Emerson Electric Co.
The AVENTICS trademark is registered in the U.S and other countries.
© 2022 Emerson Electric Co.

AVENTICS[™]

For more information:
www.Emerson.com/AVENTICS

