Success Story
Injection Molding for Medical Device Industry

The Problem

A large injection molding company that produces components for the medical device industry was having difficulty maintaining the quality of a particular molded part. Using a nylon material, production runs were inconsistent, resulting in short shot, or not completely formed parts. This was causing machine downtime, as well as increased part inspections and scrap.

The production manager and quality manager determined that either the nylon material was not coming into the mold at the proper temperature, or the pressure of the material being pushed into the mold was too low. They decided to use SensoNODE™ Blue Sensors and the Voice of the Machine™ Mobile App to analyze the temperature and pressure levels in the mold injection lines.

SensoNODE™ Blue is Parker's series of Bluetooth-powered sensors. Compact, energy-efficient, and wireless, they are designed to provide simple and useful solutions for diagnostic and condition monitoring applications. SensoNODE Blue Sensors monitor assets to help predict problems and prevent downtime, and delivers the information to your mobile device.

Voice of the Machine™ Mobile App gives access to machine and process measurements right on your mobile device. The user-friendly interface makes connecting to sensors uncomplicated and measurements easy-to-read. With customizable dashboards and alarms, you can focus on the data that's most important to you and be alerted when your measurement thresholds are exceeded. Exporting of data is done with a click of one button, which sends a .csv file right to your email.

The Solution

Working with the customer, Parker assisted with the installation of SensoNODE Blue Sensors in locations within the injection-molding machine that would allow continuous monitoring of the temperature and pressure. While running the mold, the quality manager was able to collect data and watch the resulting molded parts as they ejected from the mold.

With SensoNODE Blue Sensors and the Voice of the Machine Mobile App used to collect and analyze the data, the quality manager discovered that there was a pressure drop at certain times during the molding process. Upon further investigation, the manager discovered that a small leak in a pressure hose was causing the pressure drop. With the hose replaced, the quality manager used SensoNODE and Voice of the Machine™ to ensure the pressure remained stable during the process and that the parts were properly

Success Factors	Customer Value
Accurate and continuous monitoring of the temperature and pressure lines allowed for quick diagnosis of a problem that was difficult to identify. Data collection was much easier than using standard gauges, which would normally be in difficult-to-see locations within the machine.	The injection molding company was able to fix the problem quickly, minimizing downtime and scrap. The company also avoided more serious issues that come from shipping improperly molded parts to a medical device customer.

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