



A CUSTOMER SUCCESS STORY

The MOGAS logo is written in a bold, red, sans-serif font. The letter 'O' is stylized with a grey circle inside it. A registered trademark symbol (®) is located at the top right of the word.

PUTTING THE PRESSURE ON DOWNTIME

MOGAS is a leading manufacturer of severe service ball valves for extreme industrial applications – industries such as nuclear, petrochemical and mining rely on the company for their four decades of field and manufacturing experience with harsh plant conditions. As a result, companies can be confident that their MOGAS designs withstand high process integrity, uptime reliability and personnel safety measures.

With operations spanning the globe, the Houston, TX-based headquarters of MOGAS features a 66,000-square-foot manufacturing facility with 12 CNC machines, among other equipment. Leadership within the company identified the CNCs for improvement opportunities, yet lacked the data visibility to determine the full potential of these improvements.

MOGAS took steps to bring transparency to the floor by engaging with manufacturing integrator Shop Floor Automations (SFA) to source and implement a machine monitoring system, called DataXchange, and the Predator DNC networking solution. The DataXchange system leverages Industrial Internet of Things (IIoT) technology to communicate shop floor equipment data to production and executive teams through real-time dashboards.

With access to this reporting and alert notifications, manufacturers are able to keep track of Overall Equipment Effectiveness (OEE), utilization and other metrics. MOGAS began receiving real value from its machine data after engaging with SFA over a two-week period.

"I was receiving frequent machine alerts with operator notes indicating 'part move' during tooling downtime for a part that was taking 8 hours to make," says MOGAS Machine Shop Leadman Hector Reyes, who is a 9-year veteran of the company and handles router workflows to the machines.

REGULATING MACHINE TIME

Reyes continues, "After talking with the operator, I learned that the existing fixture was forcing numerous adjustments. By designing a new fixture to better hold the part, we were able to shave off about 5 hours of machine time."

At the same time, Reyes and MOGAS operations teams suspected that standard CNC machining times weren't accurate - but didn't possess a means to challenge them, until they brought on DataXchange.

Reyes explains, "We installed flat-screen monitors throughout the floor to share the DataXchange equipment metrics with personnel, so operators could see metrics beyond their own machines." Reyes reported that, at first, operators seemed to be a bit skeptical of the widespread sharing of data. But after a while, operators developed a new sense of pride in their work as they strove to "beat" their latest times. "Since October, we've seen an approximate 10% increase in efficiency across the board," says Reyes.

The programming of machines was identified as yet another improvement opportunity at MOGAS. Reyes estimated that the set-up time to upload machine programs and get the routers was taking 10 minutes for each part, costing the company almost \$12,000 a month in excess programming time. This cost didn't account for the repeated interruptions to his day, as he was often pulled away during programming to address other issues. It wasn't possible to track program revisions as well, according to Reyes. Commonly unproven programs would be exported and the upload/download process would have to be repeated if there were errors.

Now with Predator DNC, which networks CNCs, EDMs, PLCs, robots and other machinery in one DNC package, MOGAS has saved 9 minutes of programming time per part. The company is on track to recover the cost of both the DNC and machine monitoring solutions within a year, as a result of these savings. "I definitely recommend manufacturers look into these solutions," says Reyes. "It's money well spent."

62.5%

Decrease in Machine Time

Real-time communication alerts prompted a major time-saving diagnosis

10%

Increase in Efficiency

User adoption of the DataXchange solution encouraged operators to significantly improve production time

90%

Reduction in Set-up Time

Networking machinery with Predator DNC drastically shortened programming time per part

To learn more about machine monitoring and DNC software, contact Shop Floor Automations



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