ARCH Medical Diagnoses Production With Datanomix

ARCH Medical Solutions is a group of 11 business units throughout the US that produce orthopedic implants and precision components for surgical robotic systems. Craig Michaud, Director of Engineering at the Seabrook, NH, facility, onboards new customers and products, benchmarks capital expenditures, and implements new technologies.

THE DRIVE TO MONITOR PRODUCTION

Craig led a team that evaluated machine monitoring at ARCH Seabrook four years ago. According to Craig, "We benchmarked all of the top production monitoring companies, starting with an in-depth review and landing on a solution that met most of our requirements."

With the system, ARCH could monitor uptime and downtime, but operators needed to enter machine states into a tablet to provide context. And even though the solution had good reporting that was easily customizable, it required Craig's team to do the majority of the work to analyze the data. "We could pull all of the data from the system for analysis, but we found that not all of the data was interesting or even useful."

"Datanomix gives us deeper insights into every job, so we generate better quotes."

MORE FROM MONITORING

Since ARCH wasn't getting everything they wanted from their monitoring, they decided to evaluate Datanomix. "With Datanomix, we were impressed that we could get insights directly from CNC machine data, instead of having our operators enter reason codes on a tablet." ARCH installed Datanomix on some Willemin-Macodel machines, which are specific to the medical industry, as well as a few Matsuura 5-axis palletized machines.

Craig was impressed with the responsiveness of Datanomix. "They went out on a limb to make sure we were getting the data we needed," said Craig.

"We weren't expecting any vendor to have 100% of everything we wanted, but over the past two years, we've seen progress on all of the areas we consider to be important to ARCH's success."

PRODUCTION INSIGHTS MADE EASY

By benchmarking production as parts are made, Datanomix provides a baseline for where production should be, instead of using just experience and intuition. "Datanomix scores live production against the benchmark. A simple letter grade lets everyone know exactly where we are against where we could be."

Craig appreciates how Datanomix presents data. "The data we're receiving — production trends, real-time scoring, TAKT parts, and automated charts — are all relevant. And the web interface is super intuitive, allowing anyone to see what's happening in real-time, or to dig deeper to uncover trends and solve challenges. And, at 6 am every morning, Datanomix emails the Coffee Cup Report, an executive summary of yesterday's production."

DATA-DRIVEN DECISION-MAKING

Datanomix saves ARCH from looking at work orders and calculating actual production vs. expected production. "Between automatically capturing spindle utilization and benchmarking performance, Datanomix lets us know exactly where we're at instead of where we think we are. We know if we're on track to deliver for our customers on time and with the right margins."

With Datanomix, ARCH can see if a low grade is because of issues with the process, or if an operator is stretched too thin to get decent output for a machine. "Sometimes a grade of C is OK because the operator is running two other machines and that machine is the least important. At least we know and we can use data to make better decisions around scheduling future jobs to help take the stress off of our operators."

BETTER DATA FOR QUOTING

One business function enhanced by Datanomix is job quoting. ARCH has always done a good job of capturing the cost of operations, but with the additional operational data from Datanomix, quoting accuracy has increased. The Quote Calibration Report offers an in-depth analysis of every job run, showing how the job performed against the Datanomix benchmark.

"When we price our jobs, we use data from past jobs, so we get the margins we need. When the job is not as profitable as we like, we analyze whether it was a machine issue, the process was bad, or we just made a mistake on the quote. Having the data from Datanomix — cycle times, utilization, alarm codes, and more — gives us deeper insights into every job so we generate better quotes."

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MOVING FORWARD

In addition to connecting more machines, ARCH is adding large-screen TVs in TV Mode to the factory floor. "The more people that know what's happening, the more our efforts make sense to everybody. Datanomix makes it easier to make decisions on the shop floor, which speeds up troubleshooting and accelerates continuous improvement. We expect TVs to have a big impact."