



ShopFloorConnect can track key performance indicators to identify bottlenecks and hidden production capacity.

DIGITAL CONNECTIONS

Production tracking software helps service center unlock the power of metrics to improve efficiency and real-time data collection

BY LYNN STANLEY

In a digital world, the ability to track metal manufacturing and distribution processes is key to safeguarding product quality, improving efficiency and reducing costs. Complex coordination, integration of disparate systems, data accuracy and management of operational variables can make the task challenging. Traditional methods are often too slow to identify problem areas, leaving companies to play catch up.

Finding a real-time shop floor data collection and monitoring software solution that could mesh with enterprise resource planning (ERP) and material requirements planning (MRP) systems was a core objective for Chris Molnar, vice president of operations for Alliance Steel. In 2020, Alliance Steel moved

to a new headquarters with 500,000 square feet of temperature-controlled processing in Gary, Indiana. Capabilities range from full rail service, multiple slitters, stretcher leveling, multi-blanking, lasers, press brakes, robotic welders, and a structural tube mill.

"We have three buildings on a 26-acre campus," says Molnar. "Some of our production units are in Plant 1 and some are in Plant 2." Alliance Steel uses data and "a large number of metrics every day. I was familiar with Wintriss Controls Group and their ShopFloorConnect production tracking software at my previous company." Alongside President and COO Drew Gross, he reviewed the software on a trial basis for Alliance's facilities. "We determined it was a tool we could roll out through all of our divisions."

CONTINUOUS IMPROVEMENT

Alliance Steel installed ShopFloorConnect in 2023 as part of an effort to improve operational efficiency and collect data in real time.

"We're always focusing on continuous improvement," Molnar says. "Our primary goal is to constantly improve our customer service [experience] and on-time delivery. Secondly, we wanted to increase our processing efficiencies and simultaneously expand our production capacity."

ShopFloorConnect bridges the gap between a manufacturing company's central product lifecycle management (PLM) system and the production floor itself. It allows for the direct transfer of digital information from machines and workstations. The Wintriss software system provides Alliance Steel with real-time,

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CHRIS MOLNAR, ALLIANCE STEEL LLC

automated production data collection and analytics. The system tracks key performance indicators such as machine uptime, downtime and production rates, which helps to identify bottlenecks and hidden production capacity.

After demonstrating the software on its stretcher-leveler, Alliance Steel worked with its supplier to tie ShopFloorConnect with its tube mill ERP system. “We’re able to obtain the most accurate data on how long it takes to produce individual parts to help the team with the quoting process,” says Molnar. “Having second-to-second coding allows us to drill down on our part performance, too. In our coil processing and tubular divisions, we have seen gains in uptime of 30 to 40 percent.”

Now, employees can see processes across the campus at the same time by collecting, tracking and displaying real-time data from machines and processes in a central location. Plant Manager Ryan Raisor has experienced the benefits of a unified view of metrics since ShopFloorConnect was deployed.

“The system allows me to see how the plant is operating every day at all times,” he says. “For example, I was able to spot delays in packaging on our stretcher-leveler line right away. We were losing hours each shift. With the information we received, my team and I were able to reduce those delays to zero. The process was improved and tools were identified to make the job easier, which is what we strive to do for our employees when we work on these types of projects,” Raisor says.

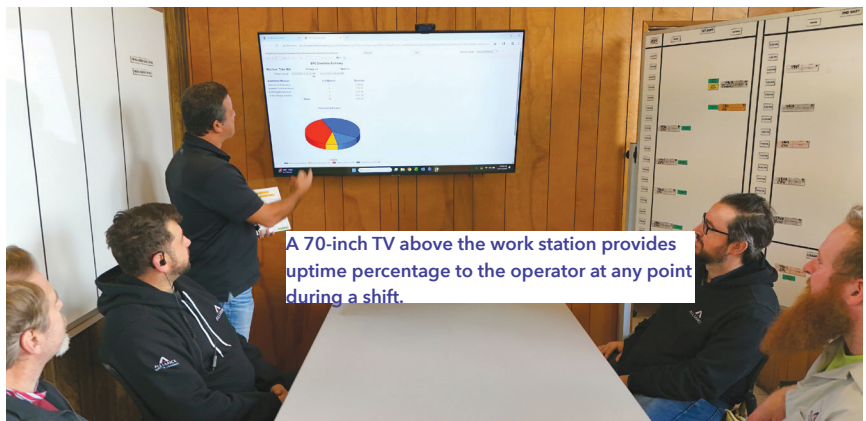
Alliance Steel is able to review line stops that could cause production and processing line bottlenecks. Coil changes, setup changes and recoiler/exit conveyor product banding are among the most common reasons for delays that can halt a processing line. The system also helps Alliance Steel focus on specific parts where non-value-added activities can be reduced or removed and waste minimized.

RETURN ON INVESTMENT

“Being able to apply the Pareto principle [80/20 rule] to fact-based unplanned events ensures that we are focusing improvement projects on those areas that will give us the



ShopFloorConnect provides Alliance Steel with real-time, automated production data collection and analytics.



A 70-inch TV above the work station provides uptime percentage to the operator at any point during a shift.

most ROI,” says Molnar.

Communication, documentation and work culture remain focus areas aided by the system. Email groups ranging from leadership, quality control and sales to maintenance and mobile equipment operators are poised to act the second a downtime code is flagged. Operators and leaders can add comments that are saved to the cloud for future retrieval and review. Employees can look at individual shifts or evaluate operations for an entire year. The data can then be used to establish preventive maintenance programs for equipment, KanBan on consumables and spare parts, appropriate upgrades and capital expenditures that will generate the highest ROI.

Molnar credits both Wintriss and Alliance employees for the company’s broad adoption of ShopFloorConnect.

“There was very little fine tuning to do when the system was installed,” he says. “As a service provider, Wintriss is very accessible. You pick up the phone and they are right there

to support you. I can call them any time and know they will answer the phone. If there is a problem, they will remotely access the trouble spot to see what’s going on.”

While the right software is a key component to lean manufacturing, employee engagement is just as important. “Our operating team was vital to the launch of ShopFloorConnect,” Molnar continues. “Our employees adapted to the software system and began using its coding modules right away. Personnel let us know where the true delays were. They also helped build downtime codes for the system.”

In addition to the software’s touch screen, he says, “they have 70-inch monitors above their stations, which gives them their uptime percentage at any point during their shift. They are working to achieve as many run hours as possible. Installing the system allowed us to tap the wealth of knowledge our employees have on best practices for moving product through our buildings with precision.” ■

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