Case Study: Moen Plating Line Optimization

Visual8 Deploys Custom Integrated Optimization Solution for Moen® Plating Line, Increasing Schedule Attainment by Over 30%

The #1 faucet brand in North America, Moen Incorporated offers a diverse selection of kitchen and bath faucets, showerheads, accessories, bath safety products and kitchen sinks for residential and commercial applications. They believe in delivering the best possible combination of meaningful innovation, useful features, and lasting value.

CHALLENGE

In 2015, Moen’s Sanford, North Carolina facility was in the process of enhancing their SAP implementation, transitioning from repetitive to discrete manufacturing processes with a concentration on process optimization and shop floor controls. As part of this plant-wide effort, they wanted to address their plating lines, which they suspected could be running more efficiently.

Scheduling the platers was a very manual and time consuming process. It required significant experience and therefore relied on just a few veteran planners performing manual procedures with up to 70 steps and using a variety of manual tools, such as Excel. Moen saw the opportunity to automate sequencing, bringing accountability to the process and capturing engineering practices to minimize scrap rates.

Without the in-house resources to address the problem of optimizing the sequencing of their daily plating production requirements, they decided to seek outside help. They sought a solution that would be seamless for their production planners, who were comfortable using their SAP interface. Rather than having the planners learn a second software, Moen sought an optimization solution that would integrate seamlessly with SAP.

SOLUTION

Moen already enjoyed a good working relationship with the Visual8 team, after successfully collaborating on a prior sequencing project. They decided to commission Visual8 to develop a sequencing tool that could schedule their daily plater production requirements, with the purpose of balancing the workload on one of their main plating lines.

Visual8 utilized its best-in-class optimization engine, and custom programmed all of the mathematical models and algorithms that were needed to manage the process. They also used SAP-certified software to integrate directly with Moen’s SAP ERP system,
enabling the Visual8 tool to generate optimized production sequences that maximize the throughput of a given work center on command.

Visual8 provided a powerful tool for both sequencing and validating daily production in a matter minutes. Moen’s Don Albrecht, Lead Business Process Consultant, Information Technology, comments, “On plater 4, for example, it could take up to four hours to generate a schedule. Now that we have the Visual8 sequencer in place, our planners can have a schedule in well under 30 minutes.” This now allows planners to rapidly readjust and reschedule on an ongoing basis.

All of the sequencing tools that Visual8 integrated with SAP share a common user interface, calling the appropriate optimization engine for each specific plater on the server. Albrecht comments, “With a common user interface in SAP, it makes it much easier for the planners to back one another up. With all the intelligence built into the sequencing tool, including the hard and soft rules, constraints, and more, it diminishes the need for planners to have specific functional knowledge of a plater in order to generate a proper sequence.”

RESULTS

Early results are demonstrating increased throughput with the optimized production sequence. Moen can now quickly create optimal sequences – which was once a manual, arduous process – taking that responsibility out of the planners’ hands. Using SAP and Visual8, the planners are now empowered to make highly effective decisions and analysis, and run multiple sequences in minutes.

Albrecht notes, “In the past, our plater 4 planner had an Excel spreadsheet of steps they had to follow and rules they had to abide by. They had to import information into a server where the engine existed at that time, and it was very labor intensive. On top of that, the schedule that was generated achieved only 60-65% schedule attainment. Today, coupled with the other process improvements that have been implemented, this particular plater is above 91% and as high as 96% schedule attainment.”

“We’re thrilled,” continues Albrecht. “And it’s not just the planners that are happy, the people on the floor also recognize that our scheduling is much more efficient.”

Moen plans to continue working with Visual8, developing and expanding the use of integrated sequencers for the remaining finishing lines within the Sanford facility.

ABOUT VISUAL8

Visual8 delivers advanced planning, scheduling and optimization solutions that help solve complex operational, tactical and strategic problems across industry sectors. For over 22 years, our comprehensive suite of customized solutions and products have empowered businesses to better plan capital investments, improve operational efficiency, reduce waste and increase profitability.