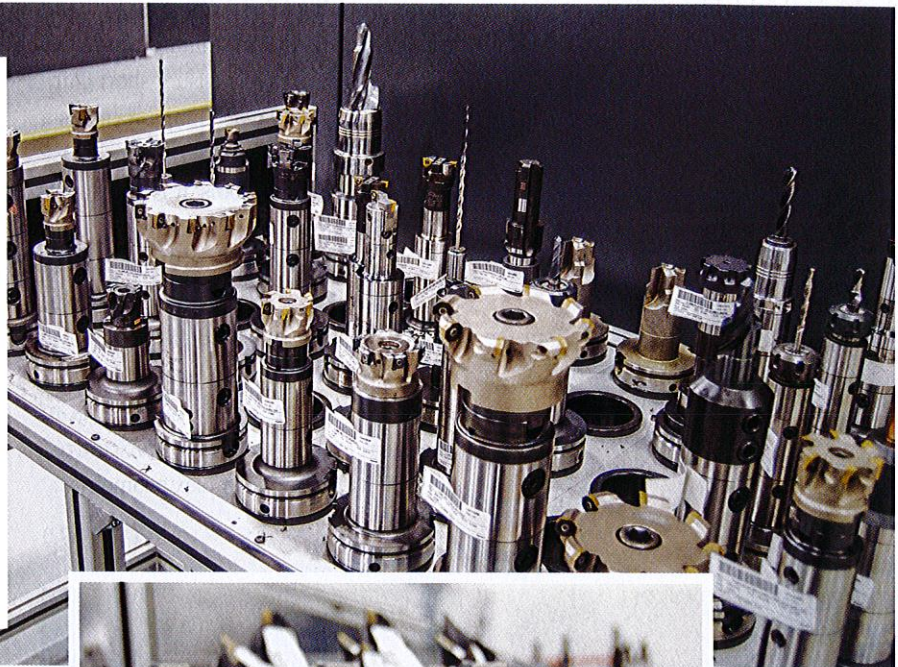


How Bosch Rexroth in Fountain Inn Pumps Up Manufacturing Cost Control

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At its Fountain Inn, SC, plant, Bosch Rexroth produces many different axial piston hydraulic pumps and valve housings for its drive products for heavy equipment and agricultural applications. Controlling the cost of more than 900 different tool assemblies it uses is a major task. A ZOLLER Tool Management System is how it's done.



Bosch Rexroth in Fountain Inn has two production buildings with more than 90 CNC machine tools, mostly DMG and Mori Seiki machining centers operating 24 hours a day, 7 days a week. Material of iron and steel are received from foundry suppliers and machined on the 4- and 5-axis machining centers which feature large tool storage capacities.

Cutting Tool Inventory Management

Due to the complex design of the products machined at Bosch Rexroth in Fountain Inn, the machining centers make use of an cutting tool inventory, which are mostly special designs to produce multiple diameters and other complex part features. They must be available immediately when needed.

Keeping accurate, timely track of engineering changes, item availability, as well as tool regrinds over the tool inventory and other indirect materials used on the



Tools are preset and line side, accurate within microns ready to go into production.

production floor was deemed essential by Bosch Rexroth management. The goal was to minimize tool cost and process cost, improve throughput, and help assure consistently high part quality.

Streamlining processes

Bosch Rexroth already had ZOLLER tool presetters in the plants to provide accurate tool offsets for the machines in order to avoid crashes and other mis-steps. The ZOLLER presetter fulfilled that mission very well. However, the Technical functions (TEF) department at Fountain Inn wanted to streamline the

tool management system further.

Looking at all the options, Bosch Rexroth at Fountain Inn, SC, decided to invest in the ZOLLER Tool Management System, reducing what had been three software suites - design, inventory and measuring - into a single suite. Now just one software is doing the engineering, toolsetting and tool management.

The ZOLLER Tool Management System Silver package a single suite of software that combines effective warehouse management and standardized production data management with organized tool management.

Central data storage

Bosch Rexroth in Fountain Inn can manage tools from the office, CNC machines, Zoller Tool Organizers, and vending machines or directly at the pre-setting and measuring machine. All information is being managed by the single ZOLLER-TMS database.

And since it is modular, the functionality can be extended step by step going forward. Bosch Rexroth in Fountain Inn takes advantage of stored tool data and DIN4000 article characteristic information to optimize inventory cost control as well as tool production.

One of the keys for the TEF department is the tool storage management module that allows managing complete tool assemblies and tool components, and keeping accessory inventories up-to-date. The storage location management in the warehouse includes a 3D design kit which allows Bosch Rexroth to display current stock three-dimensionally, easily and quickly and assign items to a virtual bin location.

The ZOLLER TMS stock-management module allows each item in the database a fast overview of bin location, in circula-



Dave Morley, ZOLLER Inc., and Michael Meyer, Bosch Rexroth, in Fountain Inn.

tion and balance on hand in stores. Feedback on circulation and stock levels are available at the push of a button. This is a major assist for gaining manufacturing transparency to run production economically around the clock with the tool inventory when needed.

The Zoller system is also a tool for supporting quality and ensuring the transparency of the manufacturing

processes. While providing simple import and export of tool usage data, as well as helping to integrate the various machines and departments.

Getting there

Previously at Bosch Rexroth in Fountain Inn, one software ran the ZOLLER presetters and another software ran the engineering tool management. The ZOLLER software reported on the reality of the tools and the engineering software provided direction on how to make the tool.

There was a big problem in that the tool setter operators had their system and the engineers were working with another system. There was always a challenge to make sure they could communicate with each other. Two databases meant two sets of information. So, Bosch Rexroth in Fountain Inn went with the ZOLLER Tool Management, (TMS) system which was not only on the presetters but is now used for tool engineering and on the machine tools. This way, a single set of data is available to operators, tool setters, and engineers.

Sounds simple, but it took some effort to create the system.

ZOLLER tool presetters provide accurate tool offset data for specific CNC machining centers to prevent crashes and other missteps.



The ZOLLER toolOrganizer allows easy, 24/7 point of use access.

