

Gibbs Gears Up Control

WITH REAL TIME SCHEDULING

With more than 400 work orders a month involving some 65 machine tools plus additional operations, such as deburring, and outsourced subcontract requirements, juggling priorities and general production demands was becoming a time-consuming nightmare for precision gear specialist and subcontract machinist Gibbs Gears.

Today, however, after installing Seiki Systems' *Real Time Scheduling System*, managing director Reece Garrod says: "We can plan and give customers realistic lead and delivery times, detect immediately when things are not going to plan, determine the impact of any changes we want to make to production and make sound management decisions based on factual information."

With the company doubling sales to £2 million in less than three years, the use

of the *Real Time* scheduler has, over the last six months, made work in progress manageable and, in turn, helped improve cash flow. As a result, Gibbs Gears is investing in new equipment and is looking forward to a move to new premises as well as developing further its IT and specialist skills.

Prior to adopting the *Real Time Scheduling System*, the company's 60+ machines were being managed using a labor-intensive Gantt chart and card index system that became a chore, demanding continuous attention and requiring constant updates.

"Because there were so many operations, we spent between 800 and 1,200 hours a month setting machines," Garrod says. "When we look back, the shop floor appears to have been running the business, and everyone was multitasking. Worse still, with 40% of work being new components or contracts, the

business was characterized by perpetual firefighting. We were even too busy to realize the roll-on effect that making a decision on the spot could bring, causing a detrimental effect to many other contracts."

With the *Real Time Scheduling System* in place, Gibbs Gears can now view on screen the immediate influence of any changes. "We can set up ghost operations for urgent jobs and immediately see the effect it will have on our order book and deliveries and make a decision on what line of action we should take," Garrod says.

The company has also found its customer relationships have improved. "Because live production data is a matter of a couple of key strokes, information is factual," Garrod says. "The customer can immediately be updated on progress, and they certainly appreciate a realistic view. If need be, we can quickly



At Gibbs Gears, managing director Reece Garrod is able to manage more than 400 work orders a month involving some 65 machine tools with Seiki Systems' *Real Time Scheduling System*.

check the outcome of split batching to deliver parts sooner, and check if we can double up machines.”

Looking in the short term, Garrod feels the company is well over 60% on target now, but within another five to six months, “This should be closer to 90%.”

Garrod describes how the software allows the company to maintain focus on what’s important. “You can see where the bottlenecks are, identify spare capacity and quickly appreciate the consequences of making changes. As the operators can also view the work queue on the shop floor, this helps them plan their day, and we now spend less than an hour a day updating the system—previously that was a full-time job.”

The decision to buy Seiki Systems software followed lengthy investigations. An MRP/ERP production soft-

ware package had been installed first, and growing Kanban and consignment stocking for customers meant greater demands on management time. The MRP/ERP was ideal for machine loading and creating a list of jobs, but it had no relevance with the capacity of the machine and other factors that tend to influence when a job starts and ends.

Also, Gibbs Gears had an arrangement where one operator ran three or four machines on certain jobs that had long production cycles. The *Real Time* scheduler package allowed the company to determine operator availability, even when the operator was working on another machine. “The competitor systems we looked at could not handle this type of strategy,” Garrod says.

“This was not an easy scenario to handle, and we are still working closely with Seiki Systems to hone the ‘what if?’ factors due to our changing operator

working practices,” Garrod adds. “When we made the decision to buy, this was clearly the best system that we could see would meet our needs. From the four systems investigated, the *Real Time* scheduler interfaced well with our MRP/ERP system, and the way it is being developed around us shows the understanding and commitment their software engineers are prepared to make.”

As Gibbs Gears is moving forward with its IT and lean manufacturing strategy, it is planned that the new premises will include a small training area with a dedicated toolroom and classroom. “We need the skills in IT, production and gear technology, and the only way to get this is to train our own younger people in-house,” Garrod says. “The same way that Seiki Systems’ *Real Time* scheduling has had such an effect on the business, we need to blend this level of IT technology with our specialist
continued

knowledge in the workplace.” ■

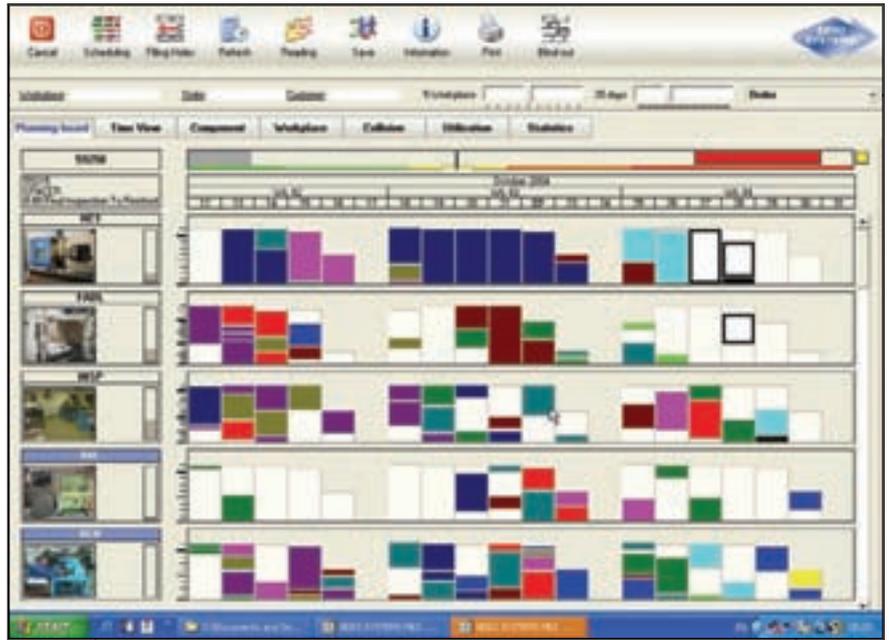
Editor's Note: Seiki Systems' U.S.-based partner is JobPack Inc., located in Elgin, IL.

For more information:

Gibbs Gears Precision Engineers Ltd.
Top Gear Court, Wellcroft Lane
Tring, Herts. HP23 4BB
United Kingdom
Phone: +(44) 1442-828-898
Internet: www.gibbsgears.com

JobPack Inc.
Technical Center
450 Airport Rd., Suite 111
Elgin, IL 60123
Phone: (877) 793-1800
Fax: (847) 741-1843
E-mail: sales@jobpack.com
Internet: www.jobpack.com

Seiki Systems
Olivier House
18 Marine Parade
Brighton, East Sussex BN2 1TL
United Kingdom
Phone: +(44) 1273-680-411
E-mail: sales@seikisystems.co.uk
Internet: www.seikisystems.co.uk



Simple and easy to view data gives precise information in a real-time situation to the shop floor at Gibbs Gears through Seiki Systems' *Real Time* scheduler.

Gibbs Gears: Keeping Busy

Based in Tring, Hertfordshire, the U.K. company has a history of 50 years of gear cutting, and it provides a 24/48-hour emergency service and the occasional reverse engineering task. These can even include the production of single gears and crown wheel and pinion sets produced for the likes of classic car buffs. This specialized knowledge of gear cutting is still core to the business, but the company is also reaping considerable success in subcontract machining involving up to five-axis turning and milling. Today that does not always involve the adding of gear teeth or splines and, as part of the company's progression, it is also investing for the future in 3-D modelling that will further strengthen the machining services provided.

Driven by new projects for petrochemical and offshore customers and a recent contract for design and manufacture of miniature gearboxes, the company is also planning expansion into the motor sport and aerospace sectors.

It already supplies specialized gearboxes to the medical, food and satellite sectors, often in very difficult-to-machine stainless steels. Also, custom anti-backlash, high-torque worm and bevel gearboxes are produced and shipped to Scandinavia, Italy, France, Spain and India as well as the U.K.

To produce this range of work, the company has on its shop floor some 40 gear shapers and both conventional and CNC hobbing machines able to produce gears from 2.5 DP to 100 DP, 0.3 module to 10 module. The company also produces spur, helical and bevel gears, worms up to 6" in diameter, rack-and-pinion sets, serrations, splines, sprockets and timing pulleys. In addition, there are machines for pencil hobbing; a Gleason bevel generator; Reishauer, Niles and Matrix gear and thread grinders; broaches and CNC machining centers.