



Epicor opens the door to process transformation at Southco

Company Facts

- ▶ Location: Warndon, United Kingdom
- ▶ Industry: Manufacturer of Specialist Latches and Hinges for Automotive, Aerospace and Medical Use
- ▶ Web site: www.southco.com



Success Highlights

Challenges

- ▶ Implement an MES system for live, accurate monitoring of machines, production and scrap

Solution

- ▶ Epicor® Mattec MES, manufacturing execution and real-time production monitoring system

Benefits

- ▶ Cost justification for new hopper system to ensure process is completely clean
- ▶ Scrap down to 0 PPM
- ▶ Overall equipment effectiveness (OEE) running at 85%
- ▶ 100% reduction in paper usage

Southco is an international manufacturer of specialist latches and hinges for a broad range of uses including automotive, aerospace and medical applications. Its customers include the biggest names in their fields, names who look to Southco for the highest standards of quality and reliability.

The company, which employs some 2,000 people across 20 manufacturing facilities and sales offices in the US, Europe and China, has always prided itself on being technology-driven. However, its production control activities had remained largely paper-based, with manual checks and tick-lists used to manage its rigorous production control disciplines.

While Southco believed its products and efficiency were world class, a culture of continual improvement prompted Southco to evaluate automated process control systems to further hone its quality and productivity.

Tackling Process and Production Control

The company assessed three different manufacturing execution systems (MES), finally choosing a real-time production and process monitoring system from Epicor. "At first, we were looking primarily for a process control system," explains Tony Ryder, the company's injection molding manager. "But, when we tested the three solutions, we saw a clear benefit in Epicor approach

because it combined production and process control in an integrated application, giving us the best of both worlds. The decision to go for Epicor was a no-brainer.”

Southco’s initial deployment was in its injection molding business in the UK. The system quickly revealed the true level of plant utilization on the shop floor. Southco was surprised to find that its overall equipment efficiency (OEE) levels were running at 52%, a far cry from its target rate and significantly short of the levels reported by the manual control procedures.

“We were able to see very quickly where problems were occurring,” Ryder says. “In a simple example, we found that color contamination was a significant issue, to the point where we were able to justify investment in a new hopper system to ensure that the production process was completely clean.”

Even a drop of the wrong color could mean that the latch for the glove compartment of a car would not match the manufacturer’s precise requirements, rendering an entire batch worthless, he explains.

Eliminating Scrap

“The Epicor Mattec MES system gives us visibility we just didn’t have before,” Ryder continues. “While we always had good quality control, what we didn’t have was statistical process control. Now we can track critical data like temperature and pressure and tune our manufacturing process to make sure that every part is good. The system gives us the ability to achieve high yield and complete consistency.”

Ryder admits that Southco had underestimated the scale of potential impact of the software. Before deploying the system, the company’s internal scrap was up as high as 15,000-16,000 parts per million (PPM) some of which was unrecorded issues due to manual systems. Within just four months of using Mattec MES, this ratio had shrunk four-fold.

Now, the business has had several months with 0 PPM.

This also means that Southco has a much stronger case when going back to its raw materials suppliers. Ryder says, “We’re now able to identify the root causes of any faults very quickly and with certainty. This allows us to avoid the costs and damage to our reputation of shipping faulty parts to our customers and it

means we can demand remedial action from suppliers because we can clearly show that our processes are not to blame.”

Payback

The payback for the business has been substantial. “We have a savings calculator for the UK deployment which is showing a net gain of US\$700,000 at the moment,” says Tobi Parker, manufacturing engineer at Southco. “That’s a very significant return on our investment.”

With actual OEE now nudging 85%, Southco is getting so much more production from its equipment that it has been able to retire five old molding machines without having to replace them. “We had been on the verge of buying two new machines, at a cost of around US\$80,000 each, but we haven’t needed to. In fact, we’ve been able to give up floor space to a new assembly line,” Parker notes. “This is all thanks to the ability to see precisely what’s going on, enabling us to maximize yield and productivity.”

“Our aim as a company is always to offer our customers the very best service possible, but being competitive means operating on as lean a basis as possible,” Parker adds. “Epicor has had a massive impact here, boosting the quality of our operations while driving out waste and unnecessary cost.”

So proud is Southco of its production and processes that the company actively encourages customers to come and visit its facilities. “They are blown away by our systems,” Parker says. “One gave us a 99% rating in their audit because of the process controls we have in place.”

ERP Integration

The deployment of Epicor in the UK was so successful that Southco has now rolled out the system across its operations in the US and China. Looking ahead, the aim is to implement it more broadly across the business, beyond injection molding into product assembly.

Southco is also working with Epicor to integrate the system with a new enterprise resource planning application from SAP which is being installed across Southco’s operations internationally.

"With Epicor on the shop floor linked to SAP in the back office, we will be able to cut out most of the remaining paper-based controls," Parker explains. "Epicor will receive work orders from SAP and send production reports directly to the planning office." He adds "We are also sending our engineering documents from our central, access-controlled system directly to Mattec MES, so that the latest revisions and instructions are always available to operators using the Epicor consoles on the shop floor. This will help ensure that processes are always set up correctly."

The move away from paper is significant. "We have removed 100% of our paper use where the Epicor system has been deployed," Parker notes.

"This is a huge aid to accuracy, as well as efficiency and our drive to be environmentally responsible."

Of Southco's engagement of Epicor, he concludes, "This is very much a partnership rather than a customer-supplier relationship. We work together very closely to develop and adapt the software as our needs change, which is very important. While a fantastic system, it is just a tool at the end of the day; successful exploitation relies on having buy-in from across the company, something that Epicor has worked hard with us to achieve."

About Epicor

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