

MITcon

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# Plant and factory improvement

## FIRST: PPG Architectural Coatings

PPG Architectural Coatings – which manufactures Leyland and Johnstone paints, as well as own-brands for Homebase, Wickes, Focus, B&Q and others – won the Plant and Factory Improvement category award and took the overall MITcon 2008 winner's trophy for its outstanding MES (manufacturing execution system) implementation.

Its driver for change was mainly increasingly variable customer orders, requiring greater number of smaller and more variable batches. That led to an activity-based costing project, which, in turn, revealed that an unsurprising 25% of downtime was going unallocated.

Which was a problem. As John Hart, production manager at the Birstall plant, says, even with a decent maintenance management system in place, without reliable reasons and durations for downtime, engineering and operations are forced to rely on assumptions and hunches.

All that changed, however, when the company installed CDC Factory (then called MVI EventsEngine), which not only measures downtime to the second, but forces operators to enter the reasons (from a menu) on line-side touch screen buttons that also prompt corrective action. In effect, that system stripped away assumptions and beliefs – and hugely improved productivity, capacity and production flexibility.

"For example, we suspected the filling machines were having to wait for pre-labelled packaging," explains Hart. "That department prints and applies enough labels for the planned run, but if the paint quantity in manufacturing has to go up to meet specification, there might be an extra 200 litres – and the operators don't find out till they're out of tins. It kept happening but, before the system, we simply couldn't quantify it."

Another problem concerned pallet changeovers: removing, wrapping and changing the pallet turned out to account for one third of all unallocated downtime. Says Hart: "There was an assumption that the pallet changeover time was insignificant, so it just wasn't looked at." But the downtime there alone amounted to 10–15% of weekly output, meaning hundreds of thousands of litres per year in wasted filling capacity.

Overall, Hart says that CDC Factory improved machine utilisation by 14% and increased output by 5%. "That's a really great performance, because we've been running smaller containers with more changeovers, so we expected output to drop. The net improvement is nearer 8% and we've already saved about 15% on labour costs."

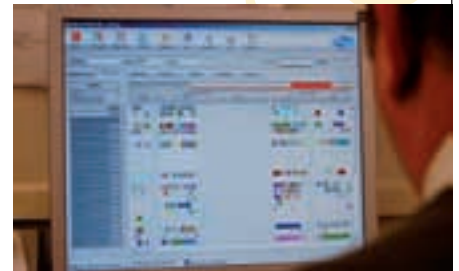
With costs of around £5,000 for the system plus £2,000 for the hardware, ROI for this system was a just few months.

## SECOND: Rayburn Plastics

Rayburn Plastics took second place for a project that involved Seiki Systems' Network Manufacturing System (NMS) with its Graphical Real Time Scheduler to provide automatic machine monitoring and works order control. Within eight months, the company saw inventory down £50,000, throughput up 25% to £16,000 per day and machine utilisation up 10%.

Other results recorded included order backlog down from £350,000 to £80,000. Indeed, the company has now been achieving its 2–3% month-on-month improvement target for several months.

Managing director David Andrews explains that, although spending £100,000 on a Sage 500 ERP system and starting the process of culture change were essential first steps in turning the company around, there were still 'holes' in production control. NMS not only plugged those, but enabled the company to



move away from reactive manufacturing to predictive selling.

Says Andrews: "The Seiki software gave us the tools to dig ourselves out of the mire. With their help we were able to control the whole manufacturing operation, involving 48 work centres, to handle the 1,600 live parts, incorporating around 14,000 operations."

## Highly Commended:

- Greencore, for the food company's integration of CDC Factory to drive production improvements – providing what operations director David Gallagher describes as "information for people on the shopfloor that can affect the next five minutes." Greencore has seen substantial improvements in everything from rework to changeovers and downtime.
- Wall Colmonoy, for its introduction of Preactor APS, which resulted in a transformation from zero to 100% visibility of the shopfloor. The company, which manufactures ultra-hard cobalt and nickel base alloy castings, powders and rod, also reports better business decision-making. For example, it validated investment in three new machine centres – which increased turnover by £100,000.
- Willerby Homes, for its Preactor APS project, which saw the holiday home builder implement lean thinking and cut WIP by a massive 80%, production lead times from six weeks to five days, and operations from three shifts to two – with zero subcontract work. ■