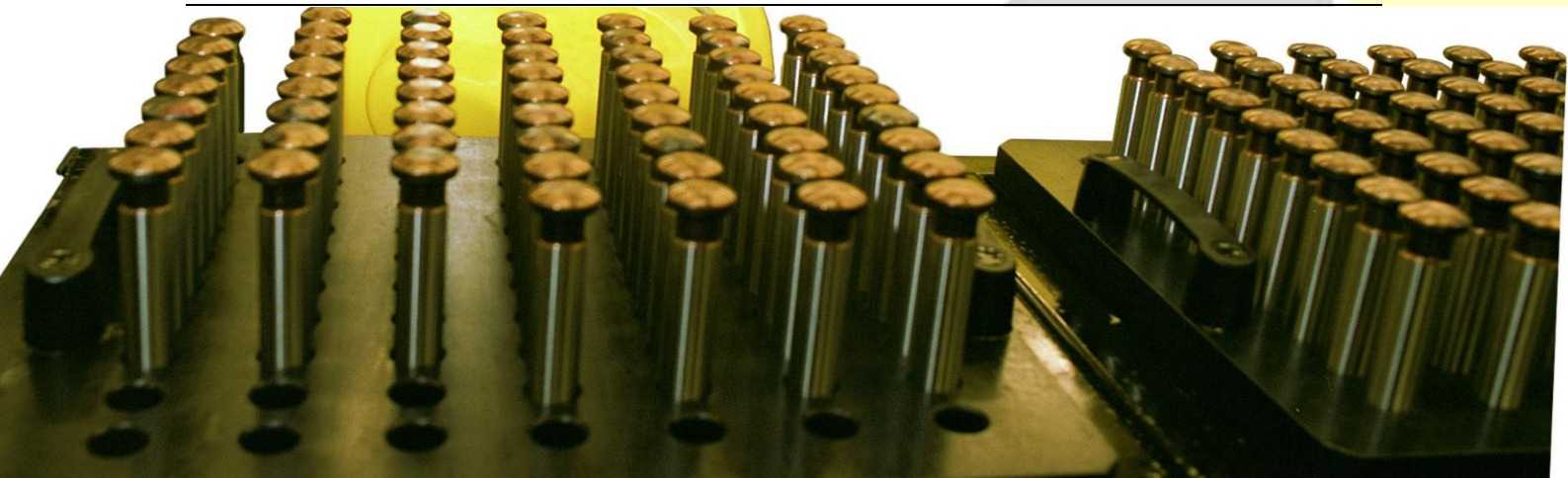




Case Study

I Holland put information at the heart of growth plans

Lighthouse Shopfloor-Online delivers tangible benefits through data availability, visibility and analysis



Introduction

You have no doubt noticed that the drugs we take in tablet form are often distinctive in shape and colour, often with embedded logos or text. The obvious reason being to make different drugs easily identifiable for the consumer. The drug companies need special tools to form the tablets into these shapes during the tablet manufacturing process.

I Holland, based in Nottingham, UK, is one of the world's leading manufacturers of tablet forming tools. They have to be precision made so that when the top and bottom halves of the tool come together to form the tablet, the volume created in the space between makes the correct dose for the tablet. Also of course, these tools make millions of tablets and so have to be hardened for use.

The tool manufacturing process itself involves a number of discrete manufacturing operations from cutting roughs, shaping,

grinding, heat treatment and tip formation; all coupled with numerous inspection operations. Manufacturing is organised on a batch basis with numerous orders at various stages of production across the floor.

New approach to information

Around the year 2000, I Holland did not have any manufacturing systems running or reporting on its factory lines. The mode at the time was that the operations were small enough for those involved to "know what was going on". However, with the appointment of a new Finance Director and a new Managing Director, both with strong manufacturing credentials, change was afoot.

The change in management brought a range of new requirements, not least a demand for 50 per cent growth in production over a five year period. To achieve this it was evident that I Holland would need better visibility of all parts of the production process. The lack of information and data was clear and that

had to change. The first step was to get a scheduling system and key machine monitoring system in place along with, at the time, a standalone SPC system from Lighthouse Systems – SPC-Light.

The partial automation brought immediate gains but further shop floor specific capabilities were important. In April 2004, SPC-Light was replaced by the enterprise-wide Shopfloor-Online from Lighthouse Systems to deliver greater control to operators. This also facilitated improved links between the order processing systems and those operating on the shop floor.

John Woloszczak, Senior Manufacturing Operations Manager for I Holland, comments, “The work we do is bespoke and about 80 per cent of our production is new product. This makes our requirements quite different to many other manufacturers. An average batch size for us is around 30 units and the specifications are customer specific, varying in many ways from one to another. We have to be sure that the tolerance levels for each customer specification are met and to do that the critical dimensions for each tool are downloaded to the work areas on the shop floor. The specifications are driven by sales order processing and delivered from the ERP through to the MES (Shopfloor-Online) with the necessary instructions. That way the

operators have the specifics of each batch in a clear instruction set at their station on the factory floor.”

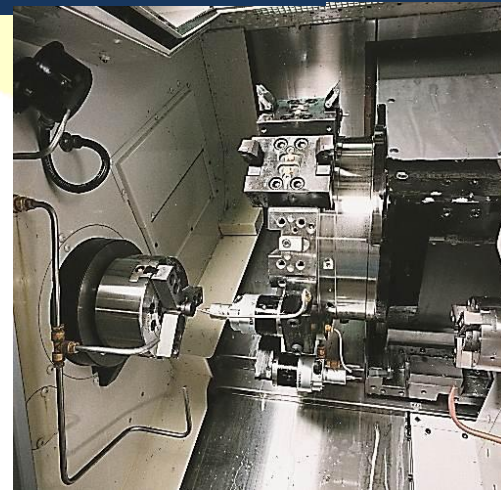
Cutting Waste

With just one production facility delivering product 24x7, I Holland is not in a position to add new production lines or increase the number of shifts per week. Instead, it has to find greater productivity through efficiency improvements. One of the first areas to be addressed was waste.

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Historically, the main cause of waste was via extra throughput that was subsequently scrapped when the production run was complete. This ensured that

sufficient, in-specification product was produced for each order. However, this extra throughput was running at between 10 and 15 per cent, so it presented an immediate and clear opportunity for savings.



Woloszczak comments, “The capacity loss through waste was significant and just by reducing it we would be able to increase plant production capacity overnight. With the automation of the order processing to shop floor systems we can ensure the set-up of the line much more accurately first time. So, now, we only put one spare through at the beginning of a production run. This is used for set-up and is then scrapped. And, waste is reduced to almost nothing.”

This new approach requires no calculations on the part of the operators which cuts the chances of human error occurring. Also, the information is available as required on the local workstations on the shop floor and operators input quality measurements directly into the system. This means that

issues are flagged immediately and they can be dealt with more quickly and effectively as a result.

Other Improvements

Having information immediately available where it is needed, on the shop floor, has reduced lead times considerably. That, in turn, has increased capacity potential and has enabled I Holland to offer its customers “priority deliveries” as an enhanced service.

Also, with the gains already being felt in the area of SPC, similar improvements are now being sought in capacity planning and analysis, downtime analysis and quality. This is possible due to the visibility and mapping of critical machines within the factory. Orders can be tracked, measurements analysed and



reaction times improved. Getting data directly from and to the shop floor was a priority and linking enterprise systems to those in the factory gives a global view of company performance.

In 2007, Lighthouse Systems specified and implemented a number of PLCs to directly collect machine data into the MES. This came at a time of quite significant cultural change within the organisation whereby much of the control was being placed in the hands of operators on the shop floor and they were being encouraged to lead much of the development. Essentially, the changes improved visibility of all aspects of production.

Woloszczak adds, “The culture change came with a new profit share scheme. This meant that the operators were more involved and influential on productivity and their actions were rewarded directly.”

Continuous Evolution

The evolution from manual records to electronic continued and in 2009 Lighthouse implemented its Complaints and Concerns Module. This was viewed as a “vital” step in ensuring greater confidence from customers. It was to link directly with the company’s CRM system to give instant responses to any customer issues that might arise.

Woloszczak comments, “By linking the systems as we have we are able to give instant and detailed responses to our customers should they have a query or complaint. This makes us much more responsive to customers and our relationships with them become much closer as a result. Essentially, this inspires confidence from everyone involved.”

Future Improvements

A corporate acquisition by I Holland has seen a once outsourced process (punch blank production) become part of the company as a

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subsidiary operation based in Asia. In order to have full traceability of the processes, Lighthouse Systems Shopfloor-Online will be implemented in the new Asia facility.

Also, some of the remaining manual operations will be automated. These might include the more cosmetic processes, such as tip face finish, surface finish and dye. The final inspection remains a manual process and this, too, will be reviewed and automated going forward.

Conclusions

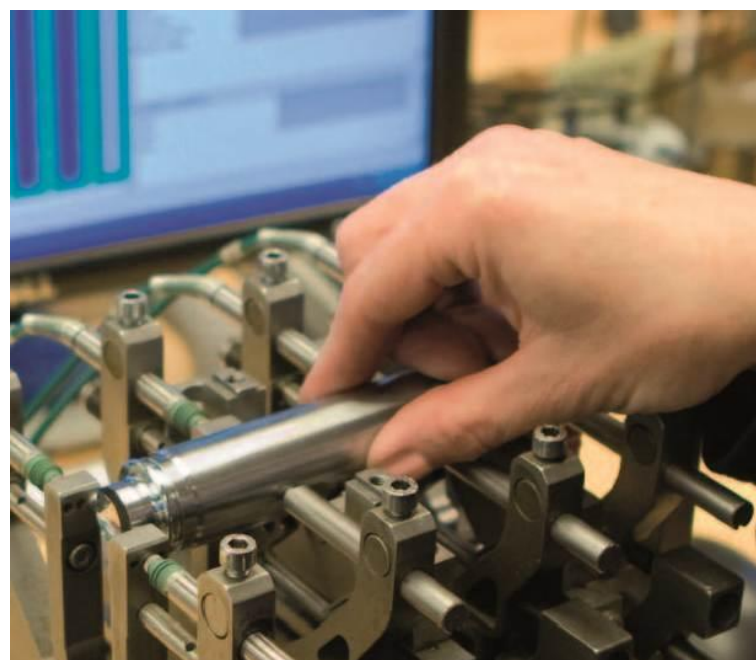
The automation of systems is well under way at I Holland and benefits have already been evident. Shopfloor-Online will be extended at the main factory and will link all other facilities as required. Its main aim is to refine and streamline existing processes to eliminate waste and maximise efficiency to ensure optimum performance at all times.

Woloszczak concludes, "Lighthouse are attuned to our processes and manufacturing principles and they have worked closely with us to develop the systems to exactly fit our

" Getting data directly from and to the shop floor was a priority and linking enterprise systems to those in the factory gives a global view of company performance"



requirements. We have achieved a great deal already and we have plans to further develop our systems with Lighthouse moving forward."



Lighthouse Systems is one of the world's leading developers of Manufacturing Execution Systems (MES) with offices in London, Singapore, Australia and Rochester, NY. Lighthouse Systems Shopfloor-Online is web based modular software that provides real time visibility of the entire manufacturing operations environment. Applications include Maintenance Management, Concern Management, Quality, SPC, Downtime, OEE, Spoilage and Inventory Traceability. Shopfloor-Online is being used in a wide range of industries with some of the biggest manufacturing companies; it is deployed in 15 languages in 28 countries.

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