



## **Rexam PLC Case Study**

## **Rexam focuses on quality at all European production plants with new software from Lighthouse Systems**

Rexam is the number one beverage can manufacturer in the world, producing more than 50 billion cans every year. This means that the production process is carried out at high speed, producing millions of cans from a single plant every day. Since huge emphasis is placed on the quality of output tight tolerances must be applied to the processes. It is paramount that Rexam protects the brands of the leading companies it supplies. After all, a product recall would be disastrous for the supplier as well as Rexam. Therefore, quality systems at Rexam plants need to be vigilant and responsive.

Although the can has become commonplace in our world and it appears, on the face of it, to be a rather simple piece of engineering, there are hundreds of features that must be checked. The quality control software must operate effectively in a shop floor environment as it is here that the checks are carried out. Also, with lean manufacturing procedures in place the software must be quick and easy to use, supporting operators in taking data and identifying problems.

Of course, quality control systems are not a new phenomenon at Rexam. They have been used here for many years. However, the previous systems were not as responsive as Rexam's requirements demanded and the company had outgrown their capabilities. The time had come to look towards pastures new where Rexam hoped to find an intelligent system to see it through the next 20+ years. Rexam turned its discerning eye in the direction of Lighthouse Systems.

### **Ringling the changes**

Rexam was looking for a number of key features in its new systems and they had to be able to stand the test of time along with constant use and scrutiny. As Bill Neilson, Customer and Operations Quality Director at Rexam, comments, "Any company can provide statistical software but we were looking for much more. We wanted something web-based so that information is easily available; that people on the shop floor can use and interpret; something that would work with other systems; and we wanted intelligence within the system so that what it produced would make sense on the floor and in the boardroom."

A company like Rexam has a lot of individual systems operating in different areas of the organisation. Production statistics, information from individual machines, stock data, maintenance records, staff levels and workflow schedules all give an insight into a specific aspect of the operations. However, bring them all together and the picture becomes that much clearer. This was one of the fundamental aims of Neilson and his team when they chose to work with Lighthouse.

Also, with 19 factories operating across Europe the ability to standardise procedures was paramount. Some of these plants had been acquired over the years and many were using different systems. A single, common software platform was a step towards standardising practices.

Neilson adds, "It is very important that our operatives can read their instructions and see their production status in their own language. Statistics and diagrams work across all languages but there is a real need for the systems to be multi-lingual. We operate in nine different languages currently but the screens used by all staff are almost identical, no matter where they work. This standard view is so important within individual plants and across the organisation when performance comparisons are required. A standard view means that we can compare like with like and identify potential production issues at a very early stage. In our business this is critical."

### **Counting the benefits**

The benefits of the Lighthouse Shopfloor-Online system are many and they are appreciated at an operator, quality management and group level. For the operators the new systems save time carrying out checks, reviewing and analysing issues. They enable feedback to be given in easily digestible charts and reports and problems are flagged immediately using alarms. Also, the software reminds operators when checks need to be done.

At the quality management level time savings are a key benefit. This is visible across all reports covering compliance against the quality control plan, quality performance, exceptions and responses. Where customers require conformance certificates the system can be instructed to produce the documentation automatically. The manual process used before would take at least 30 minutes to gather all of the data and to

complete the documentation. The automatic process is a clear improvement in terms of time but also negates the incidence of human error.

Historic data captured by the system is available to the management team for improvement and development activity and the software has been cited as a key strength in customer audits. Since it has been implemented Shopfloor-Online has enabled improvements in the process capability of the plants and reduced the level of customer complaints through improved quality assurance.

At group level the consistency of reporting across all plants through a standard software system cannot be underestimated. This has enabled the company to rely on standard quality control plans across the organisation and created benchmarks for performance in all plants. Also, traceability is key to Rexam. Automatic availability of audit trails means the company is able to respond to customer requests for product information much more quickly. It has just two hours to give the appropriate information and this is no problem using the Lighthouse system.

### **Interfacing with other systems**

The ability to interface with other systems in the plants is important as this is where real economies can be appreciated. The SAP system communicates details of all production schedules. Shopfloor-Online receives this information and after a job-change in production occurs it automatically presents the required quality checks to be carried out: it uses the correct procedures and specification at all times.

A separate system collects information about downtime events from the production machinery. This data comes directly into Shopfloor-Online giving a more complete picture of the full production process. This downtime information enables the system to work out when checks are due, taking into consideration when machines are not running.

Bill Neilson comments, "Seamless integration and communication are incredibly important to us. This means that it knows when materials are changed and from where materials are sourced. It knows how many pallets of cans are packed and the individual serial numbers for those pallets. This means that if there is a problem at any point certain pallets can be isolated and the quality data supporting that batch of production analysed. Of course, all data collected is analysed and alarms are raised

if any measurements are out of specification or out of control. We can then alert managers via email to their Blackberry devices so that they can take immediate action. This instant flow of information and alerts oils the wheels of our production process and makes us lean and efficient. All of this means that we have a constantly updated view of our production, warts and all.”

### **Analysing and reporting on processes**

All production data is analysed and reports are produced to inform those responsible for the processes on performance. SPC charts are available to operators in order that they can view the process trends and to support process engineers who need to understand how the process is performing and how to focus on process improvement activities. In addition, a wide range of reports is available to support those involved in the plants. For example, the morning production meeting will typically run a report to review all of the previous day's issues. Also, a monthly capability report allows key process parameters to be measured. With the new systems all of these reports can be tailored to individual needs as the information is so easily accessible at all times and wherever necessary. Also, information is linked so that managers and operatives can view the cause and effect of their actions, a function that was not possible with the previous systems.

The yield from individual coils of aluminium or steel is a vital component in the production process as it has a direct impact on the bottom line of the entire plant. The coil yields can be directly linked to the efficiency of the production line and the impact is financially important. After all, in the can production process it is all about getting the best from materials and plant without compromising quality.

For the customer there are statistical reports of measurements recorded during the production run of their products. Not all customers require such reports but Shopfloor-Online knows those that do and it knows when their jobs are running. This means that it can automatically produce the customer certificates at the end of each production run.

### **Looking to the future**

Having established a consistent quality system in all 19 plants, the next stage for Rexam is a project called “Global Reports”. This is a data consolidation process that will enable Rexam to take the information produced by each and every plant,

construct a number of performance reports and ultimately enable all plants to be compared.

The reports will include capability measures on key process parameters and will support an auditing capability to allow all plants to be compared to corporate specifications and procedures. It will also act as a repository for engineering to access plant specific information for improvement activities.

Neilson concludes, "Lighthouse understands our business well and has worked hard to get to that position. Our dealings with them have been consistent and their team has become an extension of our own. Together, we have established a strong production process with quality measures placed high on the agenda. We have so much data and information available from the systems that we can rely on the reports and analysis to give us a complete picture that leaves no stone unturned. This gives us confidence in our systems and means that our customers can be sure that they get nothing but the best from Rexam."