Efficiency and cost improvements in the can as standard

• Europe-wide agreement sees Siemens and Coca-Cola Enterprises (CCE) commence on automation technology standardisation strategy.
• Sidcup factory production line enhanced as CCE gears up capacity to meet demand for Coke products.
• CCE and Siemens enhance Sidcup facility to meet the demands of the upcoming major sporting event.

The Issue

Coca-Cola Enterprises, one of the world’s largest independent Coca-Cola bottler and Siemens Industry Automation are embarking on a process of standardisation of automation and controls as a result of a partnership agreement signed between the two companies in 2011.

The strategic approach is based on a standardisation to support CCE’s drive to increase the production efficiency of its bottling and canning lines; reduce levels of maintenance and training requirement across its production sites; optimise spare part stock and lay the foundations to future proof investment in its production facilities.

Against the backdrop of major sporting events in the UK and the requirement to ramp up production levels at its Sidcup factory in Kent to meet increasing demand, the standardisation of Siemens automation controls has been implemented as part of the commissioning of a £14.3 million production line newly up and running for both canned products.

The new KHS canning line with a capacity of 120,000 cph one of 5 new canning lines supplied by KHS to CCE Europe during the last 3 years, will increase capacity at the Sidcup plant by another 20 million cases per annum which will provide additional capacity not only for the summer show-piece event, but also support future growth by adding overall production capacity for the south east region generally.

The Solution

When building a new plant or line or enhancing an existing one, end users will traditionally utilise the services of several OEMs to supply individual machines to add to the line. Invariably this means a multitude of different control systems, components, software and methods of interfacing to the operator and plant as each task in the production line is dealt with individually.

Taking such an approach can lead to three potential issues for a manufacturer. Firstly, various control system architectures for machines and interfaces at the plant can lead to lower efficiency, as maintenance staff and operators have to work with and be trained on a range of machines and make sense of a varied list of different component manufacturers with inconsistent interfaces.

Answers for industry.
Secondly, costs are higher because of a substantial spare parts inventory, as well as the need to increase training of maintenance staff to cope with the diverse range of machines which can fail at any given moment without prior warning.

Finally, by not being able to network the individual components within the machine or network the machines together, manufacturers will never be able to obtain the level of data required in a real time format to monitor machine performance and improve operational efficiency.

Higher line efficiency, reduced training costs and less capital tied-up in stock of varying spare parts, which also reflects the achievement of the new KHS line, can be achieved with numerous other advantages, by applying a Siemens standardisation strategy called Optimized Packaging Line (OPL).

Under the master agreement, Siemens and CCE are working to adopt this strategic approach across Europe. At Sidcup – which has the largest range of packaging types of any CCE plant in the UK, including cans, plastic and glass bottles – the new KHS turnkey line will initially produce 150 ml and 330 ml cans with plants to introduce 500 ml cans in the future.

The Benefits

Noel Corry for CCE says, “After we analysed the installed base we came to the conclusion that a standardised approach could help us in many areas such as cost reduction, training and maintenance needs, spare parts and efficiency gains. Coinciding with the need to increase capacity, the move to a standardised approach and the implementation of Siemens’ OPL concept will, I believe, deliver real benefit in the future.”

Mat Campbell for Siemens comments, “OPL and standardisation are highly beneficial for production sites as CCE is finding out. A prime example is the ability to develop a flexible production line more easily. With all the elements of the line networked together it is much simpler to implement changes and respond to market needs. Add reduced line downtime as intuitive diagnostics deliver proactive maintenance support to ensure problems can be addressed before they become critical, as well as the time and cost savings inherent as part of a repeated engineering and operating philosophy that mean staff do not have to learn various operating procedures for several machines, and the benefits of such a strategy are clearly evident.

Automation technology can play an important role in providing the level of flexibility of production required in today's highly competitive marketplace. Standardised sensors, vision systems, robotic drives, motion and PLCs, networked both horizontally and vertically, can provide the operation efficiencies and total cost of ownership benefits. These best practice principles enable manufacturers to upscale efficiencies and reduce costs.

With this standardisation program, CCE is ready to capitalise of the benefits of the Siemens OPL agreement across their system. In line with this is also the close co-operation with CCE’s preferred supplier KHS, who are now also implementing the OPL architecture for all the key machines as standard.

This strategy is already delivering results at Sidcup and soon throughout CCE’s entire supply chain.