As the 4th largest canning plant in the world, the order of the day at Coca-Cola Canner’s (CCC) Wadeville plant is control and traceability. Four of the company’s seven production lines now have SCADA-linked specialized on-line printers for the real-time labeling of shrink-wrapped cans and entire pallets.

The objective of this project was to accurately and automatically label cases of cans and pallets of cases entering the warehouse for subsequent distribution within Coca-Cola SA’s sales territories. To do this, a good bar coding system is essential and prior to the installation of this solution, bar codes were applied manually to cases and pallets.

One of the functions of the new system, therefore, was to eliminate the potential problems of this manual approach by having an accurate and reliable bar coding system that would ensure that at least 90% of the cases were correctly coded (a case consists of two dozen shrink-wrapped 340ml cans and a pallet consists of 90 cases – containers with different capacities can also be handled automatically).

"By extending the reach of the SCADA system into the packaging lines, the case and pallet labeling printers have, in effect, become part of our production plant. This approach not only makes use of our existing assets but also gives us a great deal more control than previously as well as an accurate measurement of our production performance and stock status.”

Glen Riffel, Plant Manager, Coca-Cola Canners

The labeling of the cases and pallets needed specialist printers that were supplied by Pyrotechnical Marketing (Pyrotec) who chose system integrator Ram-Tec Systems (Pty) Ltd. to implement the total solution. Ram-Tec integrated existing and new elements in such a way as to meet Coca-Cola’s operational and business objectives.

The new SCADA system was based on Wonderware’s InTouch HMI (Human Machine Interface) and this was extended with Wonderware’s Touch-Panel Computers (part of the Wonderware Industrial Computers offering) that were responsible for running the entire suite of software solutions. The specialized Markem Cimjet Print and Apply labeling systems were supplied by Pyrotec.

The Videojet printer (already installed before this project) uses inkjet technology to label the shrink-wrapped cases of 24 cans before these are palletized.
The printed information includes the pallet number, plant ID, line number, shift code, batch number and product expiry date. The CimJet prints a label that duplicates the Video Jet information and adds the product code and description as well as a 36-character bar code. It then attaches this label onto a pallet of 90 cases. After the label is applied to the pallets, the Markem CimJet uses a barcode scanner to verify that the information is correct and that the barcode can be scanned reliably.

The oracle database automatically generates Crystal reports that are made available to all team leaders who can track the performance of their plant in pseudo real-time (depending on how often a report is generated). They are also able to see if they are meeting their required targets by checking how many pallets have been processed and take remedial action if necessary. Another key benefit is the ability to detect missing or stolen pallets by reconciling those already in the warehouse with those being processed. Since user activity is also logged, mistakes or dishonest practices can be traced back to specific operators.

‘We think that this extension of process control to the packaging lines is fairly unique’ says Alberto Pontiggia, MES Business Development Manager for Ram-Tec Systems, “but it makes a lot of sense as this is a key function in the overall supply chain and the start of logistics processes.”

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