

Solution Case Study



Heinz simplifies automation and management of food production whilst increasing efficiency using Eureka RFID.

The Eureka-411 RFID tagging system provides tracking for stainless steel food bins within the Heinz Soup Factory.

H J Heinz & Co has a long and proud history in providing quality products to consumers throughout the world. Choosing a Eureka RFID system to provide accurate tracking and automation throughout the production process means investment in the highest forms of technology equipment ensures Heinz continually improve and enhance their products.

At the heart of this automated system is a Eureka-411 Radio Frequency Identification (RFID) System. This system involves over 150 miniature rfid tags and 15 tracking antennas, which provide tracking data throughout the process to a control panel which interfaces to the control software via programmable logic controllers (PLC's).

The RF Tag

This system uses a Eureka-411 tag operating as a miniature radio frequency transponder. This tag is normally in a quiescent state, but when it comes within range of the RF field produced by an interrogating antenna, it is activated and transmits its data back to the antenna. The RF communications to and from

the tag utilise low frequency inductive coupling, and can therefore function through most non-conducting materials, allowing tag operation in very difficult or harsh environments.

Special techniques are used to allow several tags within the same interrogating field to be identified. A long-life lithium battery maintains the tag's data memory, and provides the small amount of power needed to transmit data from the tag. The Eureka-411 tag is an active type RF tag.

System Operation

At push button control stations, operators first identify the tag attached to the food bins. The system then writes data to the tag, which determines the correct route for the bins to take around the food production centre and ensures the correct contents are loaded.



The operators are directed by dot matrix displays to different conveyor points, where the tags are read and the food bins are then weighed,

loaded with ingredients and weighed again. The operators with their forklifts then collect the bins and move onto the next conveyor point until all the ingredients are collected.



The bins are then carried to a mixing machine where the bin is again identified. Once this process has been completed the ingredients are taken to be packaged and ready for distribution.

Conclusion

Using the Eureka RFID tagging system to uniquely identify each stainless steel food bin delivers a highly cost effective solution, which increases overall production line efficiency and helps to simplify automation and management whilst maintaining and improving the highest quality of goods being produced by H J Heinz & Co.

Food Production Automation & Process Control Using Eureka RFID

Avonwood Developments Ltd.

Knoll Technology Centre, Stapehill Road, Wimborne, Dorset, BH21 7ND
tel: +44 (0)1202 868000 fax: +44 (0)1202 868001
email: sales@avonwood.co.uk web: www.avonwood.co.uk

