

A trace of milk

Milk processing plants are under mounting pressure to increase processing capacity and efficiency. On top of this they face challenges from legislative requirements such as traceability and control.

When a major milk processor realised the data acquisition element of its registration and acceptance process was starting to become obsolete, it turned to Leuze electronic. Leuze was challenged with designing a robust system to record milk tankers arriving at the production plant in order to provide tractability control of the milk.

Legislative requirements such as providing traceability in accordance with EU ordinance 178/2002, required a reliable and robust system, which prompted a thorough and wide-ranging investigation of all the technical possibilities available, to find the best way of addressing the various issues. Although this entailed detailed research and numerous meetings, the time and effort involved certainly paid off.



It quickly became evident that the majority of the processes involved were capable of being covered by a single medium - an RFID data carrier (transponder). Using this carrier, the data can be transmitted from the vehicle to the dairy plant with a high degree of operational reliability. Adjustments to the operating data software even permitted a number of new possibilities to be implemented, resulting in an optimised solution.

A series of tasks, which previously required several different systems, can now be executed using a single transponder type:

- Data transfer from the collection tanker to the production plant
- Controlled access entitlement to the production plant
- Reliable, high-speed data transfer
- Documentable vehicle-specific truck cleaning
- Seamless traceability throughout the whole process
- Increased process reliability
- Simplification and standardisation of individual processes

● Recording of production times

There is a legal requirement that the data concerning the acceptability of each collection of milk (quantity, producer, temperature etc.) is recorded at the point of collection from the producer and this collection was automated. At the end of the collection route, the entire set of data is transmitted to the RFID transponder. The transponder number is used to allow site access for the vehicle to drive into the production plant or the washer, for recording documentary evidence of these events and recording operations. When the tank is drained, all the data of relevance for the milk production plant administration system is transmitted again using the transponder.

Following a trial run in two processing plants, the new system is being rolled out to other locations. This application makes maximum use of the wide-ranging scope offered by RFID technology. ❖

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