EUREKA®

Solution
Case Study

Peugeot optimise manufacturing schedules & streamline production processes using Eureka RFID.

The Peugeot car plant at Poissy began manufacturing in the 1940's and has been building cars ever since, manufacturing more than 200,000 cars a year.

The cars in the Peugeot manufacturing plant are built to a production schedule based on order intake from a dealer network spread throughout Europe. An important aspect of vehicle manufacture is to be able to deliver to a dealer network accurately and on time. From a scheduling point of view, there must reliable means to provide dealers with up to date information on orders placed.

Some of the main vehicle manufacturers are very proactive in investing in the latest technology to ensure they remain efficient and effective in an extremely competitive market. Peugeot is no exception and when it comes to selecting automatic identification, RFID was chosen to provide the high levels of control required to manufacture and deliver product accurately and on time.

The Eureka RFID Tag

Each Eureka tag is required to operate in a high temperature environment for extended periods in conjunction with appropriate cooling cycles. The thermal characteristics of the tag enable it to be used at 200˚C for at least an hour with each manufacturing cycle.

The tag is in a quiescent state until it comes within range of an RF field produced by an antenna, when it then transmits its data back to the reader. The communications to and from the tag, utilise low frequency inductive coupling allowing functionality through most non-conductive materials and operation in very difficult and harsh environments. A long-life lithium battery maintains the tag's data and provides the power needed to transmit data from the tag.

System Operation

At the start of the production line a Eureka tag is fixed to the chassis of every car body to provide a unique ID. The tag is then used to track the complete build process of the car on a power-and-free conveyor system where a network of over 80 Eureka RF readers process data from over 2000 tags.

Every point of identification is connected via a serial link to the systems main frame, which monitors and controls the information received from all of the tags.

At several points on the production line, including before and after the paint ovens, the Eureka readers are instructed, via an antenna, to read and/or write data to and from the tags.

At the end of the production line with all the manufacturing data sent to the systems main frame database the tag is removed and recycled back into the production process.

Conclusion

The Eureka active tagging system uniquely identifies each car body on the production line providing accurate real time manufacturing data. This is used to optimise scheduling, provide a cost effective and streamlined production process and help to deliver the right cars to the dealer network on time.

Production Line Tracking Using Eureka RFID

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