



PUTTING TIRES BACK ON TRACK

DUTCH RETREADING FIRM ROLINE USES RFID TO CUT COSTS AND SAVE TIME



ROLINE

Roline retreads worn tires for bus and truck companies, a process that involves cleaning the old tire and putting new rubber on the outside.

The firm retreads approximately 550 tires a week, putting each tire through a multi-stage process in which the tire is inspected, scanned for flaws, buffed to remove old material and skived to rectify small pieces of damage. A new tread is then put on the tire, which is placed inside an envelope and vulcanized at 100 degrees for four hours. Finally, the envelope is removed and one last inspection is carried out. Each stage in the process is logged on Roline's production software. The retreaded tire has to conform to the same international standard (ECE109) as a brand new tire.

Roline needs to be able to identify each tire individually, keeping track of it through the process, and to maintain an accurate inventory of all tires in its warehouse.

The firm's customers carry out regular fleet inspections on their vehicles, which entails manually looking for the identifying label on each tire. Because the label may be hidden on the inside of the tire, this involves getting underneath the vehicle to see it, a laborious task.

To address these issues Roline implemented an RFID solution from Motorola partner Ferm RFID Solutions. Working with Italian firm Smartres, Ferm RFID Solutions developed an RFID tag based on rubber patch material that can be put on the tire before vulcanization. For new tires they developed a label based on the same material used in the tire industry. RFID labels and patches are being tested by several major tire companies worldwide.

Every tire now has an RFID tag embedded. Simply by using handheld scanners – which can read the tags at up to a distance of five meters – Roline and its customers can identify, track and check tires.

CUSTOMER PROFILE

Organisation
Roline
(www.roline.tv)

Location
Utrecht, the Netherlands

Industry
Tire retreading

Partner
Ferm RFID Solutions
(www.fermrfid.com)

Motorola products

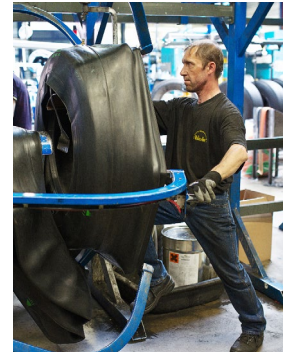
- Motorola MC3190Z RFID scanners

Applications

- **Fleet Management:** Roline's customers can check the tires on their vehicles quickly and easily
- **Production Tracking:** Roline can follow the progress of each tire through every stage of the retreading process
- **Warehousing:** Using handheld Motorola scanners to read the tags, employees can carry out an inventory of all the tires in the warehouse

“The RFID implementation from Motorola and Ferm RFID Solutions allows us to track every tire from the beginning of its life to the end. The RFID labels and patches have given a boost to our inventory control system. Inventory-checking, a job that was once time-consuming and error-prone, is now carried out accurately in a matter of minutes, because the tags can be read by the Motorola scanners at a long range.”

Hans Jorg, production manager, Roline



THE CHALLENGE

Because Roline retreads 550 tires a week, it needed to be able to identify, and keep track of, every tire. It also needed to be able to record which customer a tire belongs to, how many times it has been retreaded previously (customer service level agreements demand that tires are retreaded a maximum of three times) and where it is in the process. Previously, Roline identified tires by using barcodes. This was unsatisfactory, as they could only be read if they were facing outward, making it necessary to move the tire to scan the barcode. Very often a barcode gets dirty and therefore unreadable.

Roline's customers have to carry out regular fleet inspections to check the quality of tires. Manual checking, however, is time-consuming.

Roline needed to be able to count warehouse stock quickly and accurately, comparing the result to the information in its ERP system, based on Microsoft Dynamics-Nav. Its customers needed to be able to check the tires on their fleets more quickly.

THE SOLUTION

Roline selected Motorola partner Ferm RFID Solutions to install a solution based on RFID tags and Motorola handheld scanners. Each RFID tag contains basic identifying information, including the date of the retread.

The tag is inserted into the tire just before vulcanization, making sure that it cannot be removed or damaged. Every single tire can now be traced and identified. Each tire is scanned with a Motorola MC3190Z RFID scanner, and when the process is complete, the employee puts the scanner in a cradle that connects to the computer, enabling it to transfer data to the ERP system.

The ergonomically-designed Motorola scanners are lightweight, easy-to-use and have a convenient gun-style grip. Their fast read rates make it possible to scan the entire contents of a warehouse in a matter of minutes. Because the identity data on the RFID tag on each tire is linked to a record in Dynamics-Nav, it is possible to find out key information about each tire: how old it is, how many times it has been retreaded and whether it conforms to European standards.

THE BENEFITS

The solution has improved efficiency and productivity for both Roline and its customers. To carry out an inventory of stock, Roline employees can now scan every tire in the warehouse, confident that the result is accurate. Stock records are always up-to-date. The integration with Microsoft Dynamics-Nav means that Roline can generate reports that identify recurring issues.

Roline's customers can now carry out fleet inspections by walking around the vehicle with a handheld scanner. Extended across a whole fleet, this will save customers hours on each inspection.

It is also easy to spot if a tire has been stolen, or, if a tire is faulty and an insurance claim needs to be made, to trace the provenance of the tire.

Benefits

- **Improved precision:** Roline can identify the location of every tire, what stage it is at in the process and access information about its history
- **A faster, more accurate stock-taking process:** Roline can take an accurate inventory of its entire stock of tires in minutes
- **Simpler fleet management for customers:** Customers can now check all the tires on their fleet with an automatic scanner, rather than making an arduous manual check

For more information on how Motorola Solutions' RFID readers can benefit your business, please visit us on the web at www.motorolasolutions.com/XU-EN/Business+Product+and+Services/RFID or access our global contact directory at www.motorolasolutions.com/contactus