

Thermo King Improves Manufacturing Operations with RFID Parts Replenishment Solution.

Thermo King Corporation, a unit of Ingersoll Rand Company Limited was founded in 1938 and is a manufacturer of transport temperature control systems for trucks, trailers, shipboard containers and railway cars. Thermo King is driving lean manufacturing and operational improvements in its major manufacturing facility in Galway, Ireland.

IMEC Technologies implemented a Wi-Fi Active RFID solution for Thermo King to address its parts replenishment challenges, the solution also known as an e-Kanban system was fully integrated it into Thermo Kings internal manufacturing applications.

The system uses standard Wi-Fi and leverages Thermo King's existing Cisco Unified Wireless Network in the facility, which the staff also uses for data communications with laptops and handheld mobile computers. A solution using a hundred of Aeroscout T3 Wi-Fi-based Active RFID tags were implemented to optimize efficiency and throughput at the manufacturing facility.

Each part number that is used on the manufacturing floor was allocated a WiFi RFID tag, these tags were then mounted beside the WIP storage area used for the part. When additional parts are needed on the production line, workers at the facility simply press the call buttons located on the Wi-Fi RFID tags. Pressing the call button allows staff to wirelessly signal for parts replenishment and also raises a flag in the system for reorder at a certain level.



These part replenishment requests are then processed by IMEC's parts replenishment application. The various requests are directed to the appropriate materials handler within the warehouse. The materials handler accepts the request, delivers the goods and then completes the request. The system displays requests based on priority and also provides a dashboard view with colour coded signals on a management console indicating which requests are outstanding the longest. The solution requires no hard wires, is easy to deploy, scalable and enables flexible support of production line layout changes.



“We needed a scalable solution to reduce the time for parts replenishment, better utilise the production space available thus eliminating the need to extend the plant and increase throughput and productivity as part of our drive for lean manufacturing,” said Pdraig Campbell, Supply Chain Manager at Thermo King. The RFID solution enabled the company to improve productivity. In the future, there are plans to further increase the efficiency with additional visibility applications, such as tracking the location of dollies between various facilities.

“Manufacturers are under tremendous pressure to reduce costs and operate more efficiently, and AeroScout's Unified Asset Visibility solutions implemented with applications like the IMEC Technologies parts replenishment application are helping many companies accomplish exactly that,” said Gabi Daniely, VP of Marketing and Product Strategy at AeroScout. “RFID Wi-Fi-based solutions allow clients to drive lean manufacturing and operational efficiency in a cost-efficient manner – without adding wired or proprietary infrastructure.”