



CASE STUDY:

An RFID-enabled Uniform Service Plant

GRANTEX Inc.
The Smart Garment® People

TAGSYS develops comprehensive multi-band RFID infrastructure for item-level tracking. This universal infrastructure includes purpose-built readers and tags, as well as RFID management software, all designed to work together seamlessly, at the highest performance levels, in the most demanding environments. With a proven track record of delivering reliable production systems, TAGSYS has deployed over 100 million tags and 60,000 reader systems to over 500 customers in more than 40 countries. More information on TAGSYS can be found at www.TAGSYSRFID.com.

THE CLIENT

Grantex is an independent provider of customized rental garments, entrance mats, dust mops and industrial wiping towels. Grantex serves over 1,000 companies of all types and sizes and has a maximum plant throughput of 6,000 garments per hour. Their mission is to exceed the expectations of its valued customers through technology, innovation and value pricing.

THE CHALLENGE

With the aim to provide higher levels of quality customer service, Grantex decided to integrate RFID technology within their newly-built facility in Grand Rapids, Michigan. The previous manual system was very labor-intensive and required nine associates to hang, move, re-hang, bundle and tie garments before they were manually pushed down the rails for final storage. With this new system, Grantex hoped to reduce delays in garment processing and delivery.

THE SYSTEM IN PLACE LED TO:

- Delays in delivery of clean garments
- Inaccuracies in delivery
- Higher risk of human error
- The project team

In their newest plant, Grantex decided to implement what they described as the “latest in cutting edge technology and ergonomic efficiencies.” Because of TAGSYS’ track record of customizing RFID technology for harsh industrial environments, Grantex contracted with TAGSYS to provide a complete track and trace solution for their textile products. Chips placement in the garments were engineered by TAGSYS distributor Positek, and Jensen installed new, RFID-compatible, production and material handling equipment including automated sorting equipment.

THE RFID SOLUTION

The solution includes RFID tags (or “chips”) and RFID hardware infrastructure:

A small RFID tag (Ario™ SL), containing the garment ID number, is sewn or patched into the garment, enabling each item to be tracked and automatically sorted through the laundering process. Operating at a frequency of 13.56MHz, the tag is programmed with data (i.e. apparel size, number of washing cycles, client’s name and address) which is stored, accessed and managed by Grantex, using RFID reading stations. The tag is extremely resistant to water, chemicals, heat (up to 400 degrees) and pressure (over 100 pounds per square inch).

An RFID-enabled Uniform Service Plant. RFID readers and antennas are integrated in (patented) 3D tunnels which are used to identify soiled garments in bulk upon entering the plant and bundled clean garments exiting the plant for delivery. RFID readers and antennas are also integrated into tag programming stations, handheld readers and conveyor stations to read garments on-the-fly.

THE RESULT

The RFID system from TAGSYS has enabled Grantex to:

- Automate its sorting system, thereby speeding up its uniform processing services, enabling them to be four days ahead of schedule in delivering clean garments.
- Reliably identify each individual uniform by account manager, company and employee, making cleaning, repairs and replacements simple and accurate.
- Track each garment back to the station to monitor the quality of garment inspection.
- Eliminate delivery inaccuracies and improve all areas of the customer's uniform management services.

CONCLUSION

"Instead of normally being three days ahead, we are now routinely four days ahead, still on a one-shift operation that runs from 6 a.m. to 2:30 p.m." said Douglas Singer, President of Grantex. "Yesterday's soiled garment pickup is completely processed and hanging on the final route delivery storage lines by the end of today."



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