

Case Study | Process Optimisation

Process Optimisation Through the Use of RFID Systems

Source Kathrein Solutions

Challenge: permanent inventory transparency in real-time

A specialty cellulose and biorefinery company based in Northern Europe wants to make its factories more transparent through lean processes. The company has a production capacity of 255,000 tons of soluble cellulose, 120,000 tons of lignin, and 14,000 tons of bioethanol. All products have their origin in sustainable forestry. The bioenergy generated by the process is used internally and makes the company virtually independent of fossil energy sources. The products are mostly sold outside Northern Europe, with the largest markets based in Asia. The company's aim is to precisely adapt production and loading to the short laytimes of the ships. This increases the efficiency of the entire value chain. Intelligent logistical processes through the use of RFID systems are a suitable way of achieving this.

Solution: RFID systems

The company uses an innovative [RFID system](#) to create lean structures and streamlined processes. As the final step in the production chain, RFID tags are attached to the cellulose bales and sacks. The RFID application robot from Kathrein Solutions performs this completely automatically. In addition, Kathrein's [CrossTalk software](#) automatically ensures that outgoing goods are linked to the merchandise management system. All transports, intermediate storage as well as related processes can now be automatically recorded at 12 hall

entrances and exits via passive UHF RFID gates from Kathrein. The reading results are transmitted in real time to the logistics system. If a ship docks at the company-owned dock for loading, a loading list has already been generated from the system. Loading is now carried out via loading transponders, which are equipped with active RFID systems. When leaving the loading hall, the sacks or stacks of cellulose are thus identified on the wagon and automatically married to it. The active system automatically registers the loading of the wagon at the dock. This ensures a **seamless end-to-end tracking of the products from production to loading**. In this way, CrossTalk manages and controls both the passive UHF RFID infrastructure and the active installation of the RFID systems.

Result: RFID systems enable permanent inventory transparency

The RFID systems from Kathrein, in combination with the [CrossTalk AutotID Platform](#), enable permanent inventory transparency throughout all warehouses. This transparency facilitates optimised production control and optimum raw material management. This means that all data is immediately transparent and available at a glance. Thus, the **RFID systems from Kathrein allow intuitive planning in real time**. The RFID-supported loading process considerably reduces "wrong loading". Incorrect processes during the loading operation can almost be completely eliminated. The **laytimes of the ships have been reduced, and, as a result, a considerable reduction in logistics costs has been achieved**.