

Stora Enso increases operator productivity using wireless mobile worker technology

RESULTS

- Reduced operational expenditure through increased operator efficiency
- Return on investment in less than six months
- Faster operator reaction to potential problems



APPLICATION

Monitoring and control of de-inking process

CUSTOMER

Stora Enso Langerbrugge N.V., pulp and paper manufacturer – Belgium

CHALLENGE

The de-inking section of the Stora Enso Ghent mill is monitored and controlled from a central control room. Operators stationed in front of operator screens perform a range of monitoring and control tasks, reacting to alerts and alarms, running tests, and doing routine procedures. They are supported by staff stationed on the mill floor performing tasks including cleaning equipment, doing maintenance, handling jams, and supporting production starts/stops.

However, during night shifts there is only one operator available. The operator is unable to leave the control room to perform tasks on the plant floor because doing so would risk missing an alert or being unable to respond to an important incident. Operators become tied to the control room, which doesn't maximise their capabilities or job satisfaction. Stora Enso needed a solution that would provide operators with continuous access to process alarms and alerts while they are away from the control room, so that problems can be investigated and appropriate action taken.

“Emerson’s wireless mobile worker solution dramatically improves operator productivity and efficiency by providing instant access to data from the control system.”

Wim Schauvliege
Project Engineer
Stora Enso Langerbrugge N.V.



Ruggedized Apple iPad4 tablets with the DeltaV Remote Operator Station application.

SOLUTION

An upgrade to Emerson's DeltaV™ distributed control system for the de-inking section of the mill presented the opportunity to install wireless technology to help improve operator efficiency. A Wi-Fi network in the de-inking section provides "hot spot" access to process operations using ruggedized Apple iPad4 tablets with the DeltaV Remote Operator Station application. This solution enables operators to carry out rounds while information on the status of the process is sent from the control room to the iPad. As a result, they can deal with alarms and alerts as they occur while they move around the mill carrying out their regular duties.

iPads were chosen because they were easy to handle and quick to replace should they be damaged. The wireless network consists of ten industrial access points, a wireless LAN controller, and a network management application to provide indoor and outdoor coverage for two floors. The wireless network is fully secure using AES 128-bit encryption, and its integrity is continuously monitored.

With real-time information available, operators can now resolve problems much faster. The mobile worker application allows observations to be recorded directly into the control system, avoiding transcription errors. Operators can perform process procedures independently, and work orders can be initiated or executed while operators are located in the process area. Being able to perform multiple jobs in one operator round and saving trips between the control room and the process units has helped to improve operators' productivity as well as their job satisfaction. The increased operational efficiency has helped to reduce operational expenditure, and the return on investment has taken less than six months.



“Mobile worker technology enables operators to move around the de-inking section and perform required tasks, but still have full access to the functionality of the control system.”

Wim Schavliege
Project Engineer
Stora Enso Langerbrugge N.V.

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