

## System 800xA

### Full integration of business system increases productivity



With System 800xA installed in the hydration factory, operator Douglas Ternström avoids much manual reporting and now has full control of what is happening in the process. Magnus Hammar of ABB follows the work closely.

When the AarhusKarlshamn company in Karlshamn commissioned ABB's 800xA process control system, they dramatically minimized their manual reporting, which paid immediate dividends in increased productivity, quality and safety.

– We also raised our flexibility and gained a much simpler means of analyzing new vegetable fats during ongoing production, adds Anders Petersson, the automation engineer in charge.

AarhusKarlshamn Sweden AB (AAK), located in the Swedish coastal town of Karlshamn, is one of the world's leading manufacturers of high-value-added specialty vegetable fats. Its hydration plant is where the fats' melting points are determined according to intended application. Following a risk analysis of the plant's old control system, ABB did extensive work to adapt its System 800xA to AAK's total operational needs. In January 2010, it was ready for commissioning and the many benefits were soon apparent to all concerned.

– Increased productivity, more secure production (thanks to fewer manual operations) and full integration of business system data provides valuable feedback that optimizes our raw material purchasing. And thanks to less hands-on steps, System 800xA simplifies life for our operators as well, says Anders Petersson, the automation engineer in charge at AAK in Karlshamn.

#### Minimized manual operations

The system automatically feeds production orders into the process and reports back which material has been used as well as how much. It thus utilizes an unbroken chain of information from customer order through production planning and into process control enabled by integrating AAK's business system in System 800xA.

– This information was previously entered manually by the operators, which naturally increased the risk of human error and sometimes resulted in us running out of material, with a production stop as the inevitable consequence. One of the major goals of the automation project has thus been to minimize manual operations as much as possible, says Anders Petersson, who continues:

– With minimal manual handling, we increased both product quality and safety.

“Integrating AAK’s business system with System 800xA has greatly reduced the amount of manual reporting, which helps secure more reliable production”

### Easy information access

Smart Clients is another valued feature of AAK’s System 800xA. The system also makes it possible to collect different types of production data in an office environment where AAK staff can follow up the process and the key figures associated with it. This makes it easy to gather key values when, for example, collecting data to optimize the energy consumed by the process.

– Furthermore, the system monitors the status of the production equipment with the help of ‘asset’ monitors that signal when service is due. The aim, of course, is to attain a high level of planned and predictive maintenance.

Daniel Knutsson, automation engineer at AAK, explains that with the batch control now practiced in the plant, every batch has its own specific parameters.

– In addition, each batch is fully traceable so that we can see exactly when it was processed. It is also much easier for our process developers to change an existing recipe or create a new one without disrupting production.

### Greatly increased flexibility

When it commissioned System 800xA, AAK also increased its production flexibility and gained a much simpler means of analyzing new vegetable fats during ongoing production in the hydration plant.

– The old system originated from the mid-1980s and was very inflexible regarding the introduction of new products. We needed one that could control the entire facility and that raised our flexibility, emphasizes Anders Petersson.

– The hydration plant could only handle one single interruption in production over a three-week period, which represented a major challenge with so much technology needing to interact correctly, say ABB’s project representative Jörgen Wingren and system manager Magnus Hammar. To create the best possible conditions for success, comprehensive testing and preparations were conducted in a simulated control environment.

Since System 800xA is fully integrated with AAK’s business system, it can also be utilized in other parts of the company’s operations – a real benefit that reflects the close cooperation between ABB and end-user.

– We had an excellent dialogue throughout the whole project and arrived at plenty of smart solutions specific for our production, concludes Anders Petersson.

– And we have already begun to see how our combined competence can support AAK’s future expansion, adds Jörgen Wingren.

### AarhusKarlshamn

AarhusKarlshamn manufactures high-value-added speciality vegetable fats. Its products are used as substitutes for butterfat and cocoa butter, trans-free solutions for fillings in chocolate and confectionary products, and in the cosmetics industry.

The company has production plants in several countries and is organized in three business areas: Chocolate & Confectionery Fats, Food Ingredients & Technical Products and Feed.

### ABB

ABB’s delivery included:

- Full project implementation
- Redundant System 800xA
- Batch Management
- Business System integration
- Information Management with Smart Client
- Reuse of 5,000 Satt I/Os via Control Net
- Asset Optimization



Anders Petersson, AAK’s head of automation, is especially pleased that System 800xA has greatly reduced the amount of manual reporting, which helps secure more reliable production.



Thanks to excellent collaboration, AAK now has an automation system that not only controls processes in its hydration plant, but also in other sections of production as well. From the left: Daniel Knutsson, automation engineer at AAK, Magnus Hammar, ABB, Anders Petersson, automation manager for AAK in Karlshamn, and Jörgen Wingren, ABB.

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