System 800xA
Full control of Absolut availability, quality and energy efficiency

System 800xA put operators firmly in the driving seat when The Absolut Company selected a new control platform for its vodka distillation process. ABB system engineer Anna Åstrand, Absolut Company operator Johnny Ståhl and automation engineer Tony Knutsson like what they see. Note the large screen display in the background.

The global success of Absolut Vodka is due to more than an advertising campaign described by Advertising Age as "one of the 20th century's best." The special autumn wheat grown in the fertile fields of southern Sweden plus a delicate distillation process play a big part in giving the final product its distinctive soft grain character. The Absolut Vodka distillation process is now under the control of ABB's System 800xA. Several key control functions, including trend data, asset monitoring and Smart Client information management, help maintain the product's worldwide reputation for taste and quality.

Manufacturing Absolut vodka is a complicated and delicate process. Maintaining the right temperature in the fermentation is paramount to assuring the high quality expected of this internationally-famous brand, for example.

To ensure success in this respect, and naturally in many others as well, The Absolut Company recently upgraded the operator environment to System 800xA at the Nöbbelöv distillery just a few miles outside Åhus in the south of Sweden.

As well as helping them meet the overall future demands of a tough and competitive spirits market, System 800xA's trend function specifically makes it easier for operators to spot process deviations quickly and make the necessary adjustments.

Key process trends easier to monitor and evaluate

Easy-to-understand trend data now allows operators to see and correct deviations in the sensitive fermentation process. "If something goes wrong and cannot be corrected in time, we not only might loose a whole day's production, we must also discard what has so far been produced," says Johnny Ståhl. "However, System 800xA's trend function now allows us to monitor important key values in a much better way than before. In addition, such information is also visualized on a large screen. This helps our multi-disciplinary team see what is happening and suggest actions, especially in critical situations," he adds with obvious satisfaction.

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"By using Smart Client, we can easily access process-specific data on the computers in our offices"

Increased process reliability and efficiency

Several other System 800xA functions help The Absolut Company optimize its operations. Asset monitoring, for example, signals the need for plant object (equipment) maintenance and generates diagnostic reports that help maintenance staff proactively remedy the detected problem before it disrupts production.

System 800xA history data also help operators optimize process efficiency by displaying how energy is utilized over time. Today, the Absolut distillery consumes just over one kilowatt-hour of energy per liter of pure alcohol, making it the world's most efficient.

Smart Client improves information flow

Project Manager Anders Andersson is keen to point out the value of System 800xA Smart Client. This is a System 800xA function that allows access to process automation system data wherever an operator (or other authorized employee) is stationed and whenever it is needed. Before System 800xA, this was only possible by scanning a variety of different systems, which was time-consuming and prone to manual error. Now, for example, Smart Client quickly identifies alarms and bottlenecks in the system, giving operators the opportunity to act quickly and efficiently.

"By using Smart Client, we can easily access process-specific data on the computers in our offices," Anders enthuses. "Our ultimate goal is to integrate our business systems, weighing systems and laboratory systems with System 800xA." Bearing in mind the enormous integration capabilities of System 800xA, this ambition should not be difficult to realize.

User-friendly system with the operator in focus

It was soon clear to all that System 800xA was very operator friendly. "Users first worked on a simulator, which gave them the chance them to pass on valuable feedback to ABB," says Automation engineer Tony Knutsson. After further work on-site and verification at ABB, the new system was installed and the distillery in full operation again within just five days," notes Tony proudly.

The whole transfer to System 800xA at the Nöbbelöv distillery was thus very smooth. Not unlike the famous product made there.

The Absolut Company

Previously owned by Vin&Sprit, a Swedish government company, The Absolut Company was acquired by Pernod Ricard in 2008. Absolut Vodka was launched in the USA in 1979 and in Sweden in 1981. The special autumn wheat used to produce the soft grain character vodka is grown in the fields of southern Sweden. Some 80,000 tonnes are harvested every year and delivered to the distillery in Nöbbelöv. The pure spirit is then transported by road to the factory in the near-by town of Åhus where flavourings are added before it is poured into the world-famous bottles as 40 percent vodka.

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The Freelance controller environment is successfully controlling the Absolut Company distillery production for many years. Now step by step 3rd party PLCs are replaced by AC 800F and so become part of the DCS. ABB's delivery included:

– The project plan
– Demand specification
– Redundant System 800xA
– Asset monitoring
– Information Management with Smart Client

Thanks to Smart Client, Project manager Anders Andersson enjoys full access to all process data and history on his office computer.

Tony Knutsson (The Absolut Company), Anna Åstrand and Jörgen Wingren (ABB), Anders Andersson and Pär Björklund (The Absolut Company). In the background, part of the distillery where a new batch of the world-famous vodka is under the stringent control and monitoring of System 800xA extended automation system.

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