

Beam Global Spirits and Wine

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Harry Crigler
Distillery Operations Manager

Jim Beam and Wonderware, a Perfect Mix

Goals

- Stay true to the original 200 year old bourbon recipe

Challenges

- Improve spirits and wine plant technology while maintaining the quality of a product that has a 200 year old tradition
- Clear upgrade path of automation system to allow improvements as technology evolves

Wonderware Solution

- Wonderware System Platform
- Wonderware InTouch HMI
- Wonderware Historian
- Wonderware ActiveFactory

Results

- Increased efficiency in operations and engineering due to Wonderware software’s ease of use
- Consistent product quality due to automation
- Full plant integration involving manufacturing and facilities management



Software Solutions for Real-Time SuccessSM

Clermont, Kentucky – In 1775, Jacob Beam sold his first barrel of bourbon, setting the stage for seven generations of master distillers. Today, Beam Global Wine & Spirits is the largest spirits company based in the U.S. and the fourth largest in the world. The company is a brand leader, producing top-quality products that are enjoyed by responsible adults worldwide.

But the distiller has not reached its current success by relying solely on age-old production methods. Jim Beam is at the forefront of automation and information software solutions through its long-standing partnership with Wonderware. For over 16 years, the two companies have worked together to incorporate Wonderware software throughout the operation.

Efficient Upgrades and Growth

One of the exciting challenges facing Jim Beam in the early 90s was the need to accommodate growth. The distiller called upon Wonderware Cincinnati for a solution that would meet current needs for automation, but also provide for future expansion – without compromising the high quality standards of the product.

Wonderware recommended the Wonderware Industrial Application Server – built on the Wonderware Archestra® architecture – as the foundation of the solution for Jim Beam. The Industrial Application Server offered a uniform environment for visualization, device communications, application integration and reporting, plus an infrastructure for simplifying

1992	1994	1995	1996	1997	1998	2001	2003	2003
Wonderware® chosen for first installation at the Jim Beam plant in Clermont, Kentucky	InTouch® Human Machine Interface (HMI) software installed to automate the Clermont dryhouse	InTouch software added to the Clermont bottling line	The nearby Jim Beam/Booker Noe Distillery chooses InTouch software for automation	Wonderware Historian and Wonderware ActiveFactory® are added to both plants	Jim Beam's water and wastewater treatment plant is automated w/ Wonderware InTouch HMI software	The chilling process is automated with InTouch HMI software	Terminal services for InTouch software are added on two additional bottling lines for real-time visualization	The Booker Noe plant expands, choosing the Wonderware Industrial Application Server

First Installed in 1992

Jim Beam first chose Wonderware software for the Clermont operation in 1992, based on its ease of use and ability to interface with existing programmable logic controllers (PLCs). As the strength of the solution became apparent, it has become the software standard at Jim Beam, integrated throughout the Kentucky plants with the help of Wonderware Cincinnati, the local Wonderware distributor.

Today Wonderware software solutions are an important part of the production processes of the extensive operation, from the dryhouse and water plant to the boiler house, distillery and bottling lines.

the development, launch, maintenance and administration of future deployments. This ability to replicate systems would be a major strength for Jim Beam moving forward.

Nathan Crosley, Operations Manager Bottling, illustrates this point, “We’re finding that Wonderware is easy to use and is providing us with the data and information that we need. We’re able to control our processes consistently, and we continue to implement and integrate it throughout our entire system.”

As expansion continued, then Wonderware Historian was added to enable better management of the operation’s central database. Both real-time and historical measurements integrate the

operations center with the plant floors. And the software works as an extension of Microsoft® SQL Server® to collect comprehensive statistics while reducing the volume of stored data.

The Quest for Consistent High Quality

One of the hallmarks of Jim Beam bourbon is the product's consistency. Automation with Wonderware software has been a major factor in achieving greater control in the production process, leading to increased uniformity.

"Prior to Wonderware, a lot of the processes were manual. We would have to manually turn on valves, switches and pumps. (Wonderware) allows the operators to control the process from one location. And that gives us a lot of consistency," says Nathan Crosley, Operations Manager Bottling, Beam Global Spirits & Wine, Inc.

For instance, with Wonderware's award-winning InTouch Human Machine Interface (HMI) software, engineers view an intuitive graphical interface showing plant operations in real time. They can easily start and stop any process, reset faults and monitor productivity from a central console.

Wonderware InBatch™ batch management software is another key component for reliable product quality. Before the bourbon is distilled and bottled, InBatch software enforces recipe procedures and verifies that operators execute activities in the proper sequence, such as sending the correct measures of grains to specific silos, adding water to form a mash and introducing yeast. It also controls cooking and fermenting.

For analysis and reporting, Wonderware ActiveFactory software is integral to the system. With the ActiveFactory software, trends can be identified quickly and reports can be prepared and exported to Microsoft Excel®. This enables trouble-shooting and rapid identification of plant inefficiencies.

Crosley puts these capabilities into perspective, "In regards to metrics, what we're seeing is a consistency in throughput. Through the trending information, we're able to tell when problematic areas arise. And by having that information readily available and having it automated, we're able to take preventative action and maintain a consistent operation."

Wonderware Software Contributes to Corporate Goals

Over time, the Wonderware solution has made a significant difference in several of Jim Beam's overall objectives.

One of the most important attributes of the Wonderware solution has been its ability to make a positive impact on Jim Beam's bottom line. Harry Crigler, Distillery Operations Manager, says, "At the end of each week, we struggle to get our mashes out on time. With InBatch, we're able to do at least two more fermenters per week. So it's a big measurement factor for us – if we can produce more product in the same amount of time, it's a very big cost savings."

And along with increased productivity and profitability, the partnership with Wonderware has enabled Jim Beam to uphold other corporate initiatives, including maintaining high principles and social responsibility, strengthening partnerships and building a brand that people want to talk about. According to Crosley, "It's important that we align ourselves with partners that share some of the same philosophies and goals. And we feel that through our partnership and relationship with Wonderware, we've been able to do that."





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