Schneider Electric Maintenance Management Solution pays off for CF Industrial Fertilizer Plant

Company: CF Industries

Industry: Chemicals

Goals

Locate software to deliver continue maintenance planning functionality while providing the flexibility for growth and costs savings.

Solution

- Avantis.PRO®
- Avantis.DSS®

Story

The investment to keep homegrown application in pace with growing business is expensive (well over $1 million).

Results

- Approximate cost savings of $2 million through improved sourcing and contract negotiations
- Reduced inventory management and purchasing costs by several million dollars
- This system automates maintenance planning and tracking activities on nearly 50,000 asset entities
- Helps manage and analyze inventory and procurement on more than 60,000 items in the four CF Industries manufacturing locations

North America – CF Industries, Inc. is one of the largest manufacturers and distributors of nitrogen and phosphate fertilizer products in North America. Its operations are organized into two business segments: the nitrogen fertilizer business and the phosphate fertilizer business. Principal products in the nitrogen fertilizer business are ammonia, urea, and urea ammonium nitrate solution, or UAN. Principal products in the phosphate fertilizer business are diammonium phosphate (DAP), and monoammonium phosphate (MAP).

Upgrading Existing System Software to Improve Process Improvement

Chemical production is highly capital intensive and CF Industries, one of North America's largest agricultural fertilizer producers, recognized early on that structured maintenance could have a significant, positive impact on both operational reliability and its bottom line. In the 1980s, CF Industries developed a powerful maintenance planning and tracking application on IBM System/36 computers and gradually migrated the application to the IBM AS400 platform.

This system was very effective in helping manage maintenance activities but the investment to keep this homegrown application in pace with CF Industries' growing business was already well over $1 million.

Management reasoned that migration to a Windows-based system would enable them to continue and expand their automation-driven maintenance process improvement, while providing a familiar, easy-to-navigate desktop environment, and a standard, Internet enabled platform on which to build future enhancements.

Locating and Implementing New Solution

CF Industries set out to find software that would deliver the maintenance planning functionality they had been enjoying in the IBM environment while providing the flexibility they needed for growth. They located the required software in Avantis. PRO®, an enterprise asset management software system.

Dave Wiedenfeld, Group Project Leader, IT, said "Because we were already automating maintenance planning in a big way, we had pretty heavy duty requirements. We found that the Avantis software had most of the functionality that we needed and also had the flexibility to develop custom applications and integration to support our business.

CF Industries has now standardized on the Avantis. PRO software as its core platform for collection and storage of data on MRO inventory, procurement, and maintenance activities. They also use Avantis. DSS decision support software to analyze this data for continuous process improvement and have supplemented their system through adoption of standard catalog descriptions and categories for all MRO items, completed with the help of catalog management solutions provider I.M.A. Ltd.

This system is designed to automate maintenance planning and tracking activities on nearly 50,000 asset entities, including vessels, pumps, rotating equipment, and electrical motors. It also helps manage and analyze MRO inventory and procurement on more than 60,000 inventory items in the four CF Industries manufacturing locations.

"The Avantis.DSS software takes data from available Microsoft documents, such as Excel, and makes useful information out if it, which enables us to monitor assets and optimize efficiency. Data analysis that took two weeks is now done in ten minutes, which opens up new doors for improvement," said Dave Wiedenfeld.

> "We've installed the Avantis.DSS solution and it paid for itself almost immediately. It turns raw data into business intelligence and that improves our performance."
>
> – Dave Wiedenfeld,
> Group Project Leader, IT

Impressive Results

In comparison to the investment that the company would have had to make to develop comparable functionality in house, Wiedenfeld feels that the system has already paid for itself many times over.

The Avantis.DSS software component has proven particularly beneficial in analyzing and improving inventory and spending activities. It has contributed to reducing inventory by several million dollars by enabling CF Industries to analyze inventory activity, such as ordering frequency, number of turns, and inventory value.

Avantis.DSS software also allows CF Industries to aggregate data on spending and readily analyzes factors such as number of vendors for common items, price, and delivery performance, which has contributed to savings of approximately $2 million through improved sourcing and contract negotiations.

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In addition to enabling a much more intuitive interface for users, the new solution provides a platform on which they can grow and expand. Using the Avantis applications interface, the company has already added a custom workflow automation tool that generates inventory pick lists from work orders and purchase requisitions. They have also added a B2B vendor portal, which minimizes email, fax, or mail of purchase orders and other communications with vendors. They have plans for continued innovation and expansion across the business.

According to Dave Wiedenfeld, “For now, we can actually ensure that maintenance materials and services we need are there when we need them, know what it costs to maintain the plant, and know the best way to maintain it based on history. This puts us way ahead of the game.”

It was this successful implementation at CF Industries that contributed in part to Processing magazine recognizing Avantis.DSS software as a “Breakthrough Product.”

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