**Case Study**

**FertiNitro Experience with Honeywell Advanced Process Control**

“Installing an APC controller, or many APC controllers, provides us with the opportunity to save money and energy – which are very important nowadays!”

- Carlos Chaparro, FertiNitro, Venezuela

**Background**

**FertiNitro** (*Fertilizantes Nitrogenados de Oriente*) is Venezuela’s largest fertilizer company, producing around 1.5m tonnes of urea per year. FertiNitro is one of the world’s main producers of nitrogen fertilizer, with daily production capacity of 3,600 tonnes of ammonia and 4,400 tonnes of urea.

**Challenge**

Like most process control organizations today, FertiNitro is faced with challenges in efficiency and energy consumption. They looked to Honeywell, as their technology partner, for ways to address these challenges.

**Solution**

FertiNitro has installed several advanced solutions from Honeywell including seven of its Profit® Controllers for advanced process control (APC), Uniformance® PHD and Asset Manager in two ammonia, and two urea plants.

“We chose Honeywell because of the service. Our platform in Venezuela is primarily Honeywell, with services. We work together as co-workers. I call them anytime and solve problems – that’s why we chose Honeywell,” said Carlos Chaparro.

**Benefits**

The main solution, Honeywell’s Profit Controller application, allows easy implementation of multivariable control and optimization strategies and provides safe control of complex industrial processes. As a result, users benefit from increased throughput and improved production of high-value products at lower costs.

“The implementation of APC is already showing benefit, even in the project phase. Now in the finishing stage, we are convinced that we will see a return on our initial investment within only two years. When we have the complete application running and tuned, we expect to see increased benefit,” Chaparro explained.

**Results**

Improvements include better process stabilization and less operator intervention. The ammonia recovery Profit Controller application has raised efficiency by 10% and reduced steam consumption by 4%. In the two cleaner-water sections, Profit Controller maintains a stable steady state condition. A controller in the urea plants maintains the ammonia/carbon dioxide ratio and achieves optimum decomposition by reducing the steam requirement, while in the ammonia plants Profit Controller stabilizes the critical 3:1 hydrogen/nitrogen ratio. Other Profit Controllers are being designed to enhance those already running.

“In a specific section of the plant, we have seven controllers for production. In one APC controller, we have seen an exceptionally good business benefit, proving a real return on investment. Considering this significant achievement, we expect even greater benefits from all seven controllers. We now have the platform to develop more projects and we are in the process of developing three additional APC controllers. The prospects are very good,” said Chaparro.
Summary
“The best thing in working with Honeywell is the people. To interact with people and see that they really understand us when we ask something is important to us. Their responses are clear not only in selling products, but also in selling solutions,” added Chaparro.

About Honeywell’s Profit Suite
Honeywell’s Profit® Suite products address all aspects of advanced process control and optimization from improving regulatory loop control to globally optimizing the entire process using a unique layered approach. This model allows new technologies to be easily added at any time to a common platform that meets optimization objectives without compromising on future opportunities to improve business performance.

Delivered through the unified Experion® Process Knowledge System (PKS) architecture, Honeywell’s Profit Suite solution improves profitability by increasing throughput, reducing costs, increasing yields and improving product quality.

About Honeywell’s Profit Controller
Profit Controller is an integrated component of Honeywell’s Profit Suite for Advanced Control and Optimization. It includes the tools necessary to design, implement and maintain multiple-input/multiple-output (MIMO) advanced process control applications. It has the unique ability to maintain superior process control even with significant model mismatches that result from underlying process changes.

Profit Controller utilizes a dynamic process control model to drive maximum value by predicting future process behavior. It ensures optimal process control response by using the minimum manipulated variable movement necessary to bring all variables within limits or to set points.

With Profit Controller, users not only benefit from project payback periods of less than a year, but also from sustained benefits that exceed the industry norm.

For More Information
To learn more about Honeywell’s products and services, visit our website www.honeywellprocess.com or contact your Honeywell account manager.

Honeywell Process Solutions
Honeywell
1250 West Sam Houston Parkway South
Houston, TX 77042

Honeywell House, Arlington Business Park, Bracknell, Berkshire, England RG12 1EB UK

Shanghai City Centre, 100 Junyi Road
Shanghai, China 20051

www.honeywellprocess.com