

# Huntsman Corporation Uses PlantWeb® Digital Architecture to Improve Recovery Section Operations



## RESULTS

- 18% per year reduced energy usage
- Improved product quality
- 10% increase in throughput



## APPLICATION

Ethylene amines purification.

## CUSTOMER

Huntsman Corporation, Freeport, Texas.

## CHALLENGE

After an outmoded control system was replaced with Emerson's state-of-the-art DeltaV™ automation system, the company also needed to replace the existing control system for the distillation columns.

## SOLUTION

While advanced controls for this critical part of the process might have been obtained from other sources, the advanced control package embedded in the DeltaV system offered the greatest potential for improving the distillation process with the least cost to implement.

Huntsman engaged two Emerson process control consultants to study deficiencies and opportunities for improvement in the existing distillation control scheme. They were challenged to determine if greater energy efficiency and increased throughput could be achieved. Following the study, the consultants' recommendations were accepted, and Huntsman chose to implement Emerson's SmartProcess distillation control package which utilizes model predictive control (MPC) embedded in the DeltaV system.

One immediate benefit of this solution was a faster, easier, and less expensive deployment of their advanced process control strategy, implemented by a close-knit Emerson/Huntsman partnership. The PlantWeb architecture also includes Micro Motion® mass flow meters, Fisher® valves and FIELDVUE™ digital valve controllers, Rosemount® instrumentation, and AMS™ Suite: Intelligent Device Manager predictive maintenance software.

The combination of advanced process control and other Emerson technologies and services is enabling Huntsman to meet their goals for improving their recovery.

***“We implemented Emerson’s SmartProcess distillation application and the embedded MPC with the help of their control experts. In the first phase, MPC helps us maintain a project accomplishment of about 18% energy savings over past performance. The second phase is currently underway, and the project effort has achieved about 6% improvement on some of our biggest energy users so far. Although the performance of the system in the long term remains to be seen, we are hopeful the SmartProcess distillation application and MPC will help us maintain these savings – without other adverse impacts.”***

**David Johnson**  
Maintenance and Engineering Manager  
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For more information:  
[www.EmersonProcess.com](http://www.EmersonProcess.com)

