

Chemical Company Enhances Aux Boiler Efficiency with Improved Combustion Controls and Tuning



INDUSTRIAL DESIGN SOLUTIONS

A large chemical manufacturer selected control systems integrator Industrial Design Solutions in 2017 to update their Aux Boiler's Honeywell HC900 controllers in conjunction with a combustion efficiency improvement project.

BACKGROUND

A chemical plant that runs several large auxiliary boilers needed to improve the efficiency of their forced-draft (FD) fans and reduce energy use. To do this, they needed an engineering firm to modify the Aux Boiler's control algorithms to properly handle the new VFDs.

SOLUTION

The company selected IDS, a control system integration firm based out of Phoenix, AZ, to make the necessary Honeywell HC900 logic, third-party controller, operator graphic, and process tuning changes for this project. IDS used their large-scale boiler control expertise to properly implement the changes and supply an effective solution to the plant's needs.



- IDS performed modifications to the plant's HC900 controllers, bringing multiple systems from different vendors together to form a cohesive process control solution
- Dynamic controls were added to the flue gas recirculation paths
- Highly coupled interface between the combustion controls and burner management controls, ensuring process integrity and safety

THE BOTTOM LINE

IDS works closely with customers to make both large- and small-scale process control changes which can improve plant performance and reduce operating costs.

SOLUTION BENEFITS

- Multiple systems from different vendors integrated with proper communication channels
- Ensured process integrity and safety of Burner Management System (BMS)

SOLUTION ROI

- Clean, easy to understand process control logic reduces troubleshooting costs
- Expert integration services from IDS improve startup times
- Professional tuning services from IDS improve plant performance and efficiency

SOLUTION PLATFORM

- Honeywell HC900 controls for Boiler Control System (BCS)
- Allen-Bradley PLC controls for BMS system

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Project Duration: 3 months