

IDS Implements High-Fidelity Operator Training Simulator for Once-Through Boiler Using Honeywell UniSim Design



INDUSTRIAL DESIGN SOLUTIONS

In 2015, a large energy company selected Honeywell Channel Partner Industrial Design Solutions (IDS) to use the Honeywell UniSim Suite for developing an advanced operator training simulator.

BACKGROUND

A large power generating station was looking for a training simulator to provide a realistic training experience for the plant's operations staff. They needed a high-fidelity simulator that used Honeywell's Experion control system as a front end, mimicking the same experience an operator has from the plant's main control room.

SOLUTION

IDS worked closely with the utility and Honeywell to develop a state-of-the-art model of one of the plant's once-through boilers using dynamics within Honeywell UniSim Design. This model was coupled with the Honeywell UniSim Operations product to provide a connection to the Experion DCS using simulated C300 controllers.



- High-fidelity model of a once-through boiler
- Same logic and operator interface as plant's existing control system
- Various starting points
- Simulation of hard panel switches
- Instructor-initiated faults and malfunctions
- Customized instructor training on using the simulator

THE BOTTOM LINE

Simulators are widely used to accelerate operator training and reduce mistakes. Why not contact IDS to find how your plant can benefit from purchasing a high-fidelity process simulator?

SOLUTION BENEFITS

- Accelerated operator training
- Robust analysis of DCS logic
- Testbed for control system changes
- Unit reliability improved, giving operators experience with startups and process upsets

SOLUTION ROI

- Reduced operator mistakes due to accurate training
- Reduced safety risks associated with untested control logic
- Improved standard operating procedures

SOLUTION PLATFORM

- Honeywell Experion PKS control system with simulated C300 controllers
- Honeywell UniSim Design plant model
- Honeywell UniSim Operations simulation environment

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Project Duration: 1.5-2 years