

Refinery Implements Real-Time Integrated Decision Support System

Honeywell Uniformance® Asset Sentinel and Intuition™ Executive Provide the Foundation for this Innovative Project

Application Note

The real-time integrated decision support system empowers our users with the right information at the right time – so they can make the right decisions based on reliable data. Early indication of abnormal plant conditions and real-time visibility into important key performance indicators enables our organization to operate more strategically to meet our goals and objectives.

– Senior Manager, Decision Support Systems Unit

Challenge

Despite large investments in various MES applications and infrastructure, this refinery found it difficult to respond quickly to adverse plant conditions in real time. Often, information available to users was neither timely, nor actionable, impairing the users' real time decision making ability, thereby reducing overall operational efficiency.

It was clear to the team that they needed to enable plant operational personnel with a decision support system that would provide credible, actionable information with early indication of any abnormal plant conditions, allowing enough time to take action.

Solution

The customer decided to evaluate the Honeywell solution by choosing a key piece of equipment – a crude preheater from one of the refinery's Crude Distillation Unit (CDU).

The objective of this project was to achieve plant wide real-time integrated decision support solution for the chosen unit, improving personnel and refinery performance through early detection of abnormal operating conditions and proactive process improvements actions.

These following capabilities required to be part of the solution architecture to support the decision making process:

- An Equipment Performance Modeling platform, which monitors and tracks performance deterioration and provides early indication of any abnormal plant conditions.
- A visualization platform to provide all the relevant, actionable information to users in a contextual fashion.
- Pre-built workflow execution templates to foster user and application collaboration.

Vendors other than Honeywell either lacked the domain expertise to understand the issues being addressed or the technology to provide a solution to meet the requirements.

Bringing both technology and domain expertise differentiated Honeywell from other vendors.

Advanced Solutions from Honeywell

Honeywell is the world's leading provider of advanced software solutions to the process industries. Its award-winning advanced software portfolio and consulting services help users make sense of all the data in their plant(s). Solutions tackle complex problems through a unique outcome-based consulting approach that supports better process design, process history and analytics, operations excellence, production management and enterprise collaboration. These solutions allow users to make faster and smarter decisions to improve safety, reliability, efficiency and sustainability.

For More Information

Learn more about how the Honeywell Uniformance® Suite provides the data, analytics and visualization solutions you need to turn plant data into actionable information, visit www.uniformance.com.

Honeywell Process Solutions

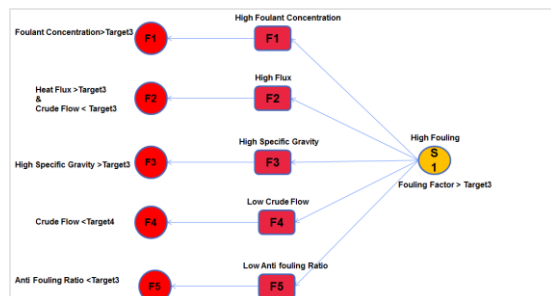
1250 West Sam Houston Parkway South
Houston, TX 77042

Honeywell House, Skimped Hill Lane Bracknell,
Berkshire, England RG12 1EB UK

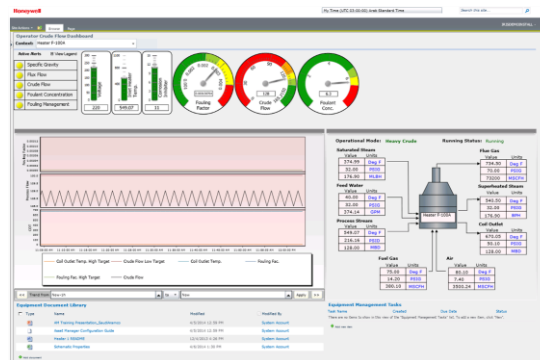
Building #1, 555 Huanke Road, Zhangjiang Hi-Tech Industrial Park, Pudong New Area,
Shanghai 201203

www.honeywellprocess.com

Honeywell Uniformance® Asset Sentinel served as the Equipment Performance Modeling platform, monitoring and tracking performance deterioration, calculating performance indices, and identifying the root cause of failures by modelling the relationship between symptoms and faults.



Honeywell Intuition™ Executive was used to build dashboards that presented context based information for effective and efficient decision making in a web portal built around Microsoft SharePoint pre-built workflow execution templates. Collaboration and workflows effectively engaged the right people for making the right actions as an integral part of the system.



Customer dashboard with KPIs.

Benefits

The real-time integrated decision support system empowers users with the right information at the right time - so that they can make the right decisions based on facts. Early indication of abnormal plant conditions and real-time visibility into important key performance indicators (KPIs) enables the organization to operate more strategically to meet stated organization goals and objectives.

Results

The pilot project showcased value in the following areas:

- Maximized the value of existing technology investments;
- Provided real-time visualization of Key Performance Indicators (KPIs) for business optimization & operations;
- Enhanced the capability to respond in real-time to adverse plant situations;
- Increased operational efficiency by monitoring equipment KOI and KPIs; and
- Decreased system administration costs by replacing hard-coded point-to-point connections between systems with a single integration platform that is reliable, flexible, and easy to maintain.

AP-17-02-ENG
March 2017
© 2017 Honeywell International Inc.

Honeywell