

S-OIL Improves Production Capacity and Decreases Energy Consumption With Honeywell Profit Suite



“Honeywell was the logical choice because of its extensive refinery APC experience and local engineering capabilities. And it turned out to be the right choice as well. The implementation went smoothly thanks to the methodical project management from pre-test through commissioning. The users find the system easy to understand and simple to maintain.”

Dr. Soon-Cheol Chang, Energy Technology/Management Team, S-OIL Onsan Refinery

Benefits

S-OIL selected the Honeywell Profit® Suite Advanced Process Control for the Onsan oil refinery complex for its superior functionality, the Honeywell team’s engineering skills and ease of system maintenance over the competitors that S-OIL considered for the project. The expansion project took three years, and upon completion the company has achieved many benefits, including:

- Seamless integration with Honeywell Distributed Control System (DCS) and with a non-Honeywell DCS
- Considerable improvement in yield as the controller pushes the plant to its operational limits
- Achievement of S-OIL performance targets for its 14 units
- Decreased energy consumption and a significant savings in fuel cost



S-OIL’s Onsan refinery takes advantage of Honeywell Profit Suite to improve its efficiency.

Background

S-OIL is considered the most competitive and a leading oil refiner in the Asia-Pacific region, and leads the Korean domestic petroleum market. The company was founded in 1976 in Seoul, Korea, and the company produces petroleum and lubricant products.

S-OIL was aiming to set up a growth engine for its future. The company sought an Advanced Process Control system to maximize process efficiency at the refinery, including increasing throughput and streamlining production, while decreasing energy consumption.

Challenge

With a focus on yield improvement and energy efficiency, S-OIL began the search for an Advanced Process Control solution for the Onsan refinery complex. The company had an APC solution previously running a single hydrocracker unit at the complex, but opened the search to multiple vendors to ensure they chose the best solution for the vital task of advanced process control for the entire complex. Initially, S-OIL was inclined to choose the same APC they had running, but upon closer inspection decided that Honeywell was the better choice.

“We wanted to make sure that we took every opportunity to maximize process efficiencies, and we recognized that an advanced process control solution was the best tool to meet our goals. APC fits with our company philosophy of striving to always be more efficient and to minimize our impact on the environment”, said Dr. Chang, Energy Technology/ Management Team, S-OIL.

Solution

After reviewing several vendors, S-OIL selected Honeywell because of its depth of experience, engineering skills and ease of system maintenance. Differentiators that stood out for the company were the local experience of the Honeywell Advanced Process Solutions team in Korea, and access to the Honeywell global APC engineer pool.

Profit Suite is composed of advanced process control technologies that enhance the capabilities of a facility's distributed control system (DCS). While the DCS maintains individual controller set points, Profit Suite continuously analyzes a broad range of process information and determines how to improve a plant's overall operations. It then adjusts DCS set points within operator-specified ranges to achieve the economic goals.

Honeywell worked closely with S-OIL to engineer and implement Profit Suite at the major units of the refinery complex. Since implementation, S-OIL has increased throughput, streamlined production, decreased energy consumption and improved overall efficiency.

Honeywell's Profit Controller has proven its ability to push S-OIL's plant to its operational limit and to save fuel usage without additional work from an operator. Since implementing Profit Suite, S-OIL has gained notable fuel savings, which is significant from a cost saving perspective in addition to meeting an environmental goal of the company to reduce emissions.

S-OIL completed its Onsan refinery expansion project with a 1.4 trillion Won investment to construct facilities for increasing production to 1,600,000 tons of paraxylene and 580,000 tons of benzene per year from 2008 to 2011. The company is planning to apply Honeywell Profit Suite to these new facilities too.

More Information

For more information on Honeywell's Profit Suite Solution or any of Honeywell's Products, Services, or Solutions, visit our website www.honeywellprocess.com, or contact your Honeywell account manager.

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