

BP Marlin Oil Platform Increases Production with Profit Controller



Honeywell's Profit Controller helped BP increase the oil and gas production rate from the Marlin offshore platform, while maximizing revenue and profit.

Benefits

Honeywell's Profit[®] Controller helped BP realize many performance and business benefits for its Marlin offshore platform. By implementing Honeywell's advanced process control solution, BP was able to:

- Increase production due to an economically driven multivariable controller
- Minimize project risk with improved reliability and uptime
- Maximize return on capital employed (ROCE), production, revenue and profit

Background

The BP Marlin tension leg platform is located in the Gulf of Mexico, approximately 100 miles southeast of New Orleans, Louisiana. It produces oil and gas from the Marlin, King and Nile fields.



Honeywell's Profit Controller increases productivity and profitability for oil production.

Challenge

Like other operators of offshore platforms, BP wanted to maximize the production rate from the Marlin platform. However, numerous process constraints limited the production rate despite the enormous oil and gas reserves. If some of these constraints were violated, the operation could be stopped or equipment damage could occur. Since operators could not monitor all of the constraints continuously, the platform operated at a conservative safe distance from the limits. Thus, BP could not fully use the potential of the offshore platform.

Operators were unable to operate the platform at peak production rates because various constraints that could potentially trigger the platform shutdown would continually change state from active to inactive and vice versa.

Solution

Profit Controller, Honeywell's multivariable control technology that has been successfully used in hundreds of complex refining and petrochemical facilities all over the world, was used to address this problem.

Profit Controller was installed on the Marlin platform in October 2003. When the controller was implemented, benefits were realized immediately, allowing BP to achieve a quick return on investment. The Profit Controller continues to maximize the production rate at the Marlin oil platform.

BP Marlin uses various third-party Programmable Logic Controllers (PLCs) that are OPC compliant. Since Profit Controller is able to communicate with any OPC-compliant device, no additional hardware was required to address the communication issue. While Profit Controller is tightly integrated with Honeywell control platforms, such as TPS and the Experion® Process Knowledge System (PKS), its open architecture enables it to communicate with any OPC-compliant device. Patented robust algorithm enables this controller to handle any model mismatch gracefully. This controller can be successfully deployed when there are significant process interactions, one or several process constraints that are measurable or significant process downtime.

Profit Controller monitored 12 process constraints that limited the production rate. The controller increased the oil and gas production rates immediately while consistently operating at or near one of the 12 prevailing constraints.

Honeywell's Profit Controller is a true multivariable controller with the ability to monitor multiple process inputs and manipulate multiple outputs simultaneously to keep the process in control. Additionally, the controller has a built-in optimizer that enables users to define the value of any of the inputs or outputs and the controller, then drives the process to minimize the cost (or maximize the profit) while maintaining the process within operator-specified limits.

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More Information

For more information on Honeywell's advanced process control solutions, visit www.honeywell.com/ps or contact your Honeywell account manager.

Automation & Control Solutions

Process Solutions

Honeywell

2500 W. Union Hills Dr.

Phoenix, AZ 85027

Tel: +1-602-313-6665 or 877-466-3993

www.honeywell.com/ps

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