Petrobras Reduces Burning of Gasses in Offshore Platform via Asset Optimization

Petrobras identifies and reduces downtime and losses through implementation of a combined package of services and software, including Optimize^{IT} Real-Time Production Intelligence (Real-TPI).

Client:	**Petrobras**
Location:	**De Campos Bay, Brazil**
Scope of Work:	**Optimize^{IT} Real-Time Production Intelligence (Real-TPI) and additional process optimization services and software from ABB Performance Services and Vetco Aibel**

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The Background
Pampo (PPM-1) is a Petrobras offshore gas platform. It has been in service since 1983. It is located in De Campos Bay, which borders Brazil to the southeast (in the Rio De Janeiro area). Pampo currently produces 235.000 m3/gas daily.

The National Petroleum Agency of Brazil (ANP) requires a limitation on the gasses burnt on off shore platforms with a focus on reducing the environmental impact.

Solution
Under normal conditions, the gas compression system or Steam Recovery Unit (SRU) reprocesses gas and keeps the gas which is burnt in the atmosphere under control to about 1000 m3/day. However, should the SRU fail, the gas which will be burnt through the flare can increase by more than tenfold daily.

In August, 2004, ABB Performance Services and Vetco Aibel delivered a combined package of services and software to optimize the SRU process. (Vetco Aibel – formerly ABB Offshore Systems – is a leading provider of

project management, engineering, procurement and construction services to the upstream oil and gas industry).

One of the services delivered to Petrobras is ABB's Real-Time Production Intelligence (Real-TPI). Real-TPI is an information system that improves productivity by identifying ways to increase efficiency.

This user-friendly software program uses industry standard production evaluation techniques to deliver measurable Key Performance Indicator (KPI) improvements.

Real-TPI provides a production trend screen, including the OEE or other user-defined performance indicator. A dynamic Pareto chart reports the cumulative breakdowns according to category. With the help of a chronology screen, the chart enables an operator or production manager to determine the overall situation on a production line, and focuses on the most relevant events. By selecting a color, the user can see at a glance all the incidents that have occurred during a particular shift, day, or week. Each color corresponds to a class of operation and shutdown.

Available to a worldwide market, Real-TPI software supports multiple languages, enabling users across the enterprise to work on the same data in different languages. Users can even switch from one language to another online, which is a critical feature to promote operator adoption of these process improvement methodologies.

For Petrobras, Real-TPI collects equipment and process information from the control system of the Steam Recovery Unit and delivers improved visibility of the process, using integrated information. Optimization of the process is based on the analytical reports of Real-TPI, such as detailed process and equipment events, Pareto and chronogram analysis. Equipment functions and processes are now supported by statistical informa-

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- Optimizing Plant Asset Availability and Performance

- Measuring and identifying ways to improve production and process performance

- Running smarter and better at substantial cost savings

- Reducing Time to Decision and Action

- Integrating Information for Improved Visibility

tion, identifying upcoming abnormal events. This information is invaluable for revamping of a control system, together with optimization of the control loops (a service performed by Vetco Aibel).

Results

Implementation of Real-TPI has enabled improved control of the Steam Recovery Unit. Reductions in downtime and losses have decreased costs and energy consumption. All phases of the process can be evaluated based on consistent information delivered by Real-TPI. With Real-TPI, the Pampo platform can now focus on fulfillment of the "Zero Burning Program" of the Brazilian National Petroleum Agency.

For more information on how ABB's Optimize IT Real-Time Production Intelligence (Real-TPI) can be employed to solve your production issues, visit us at www.abb.com/controlsystems.

For more information on how ABB's Industrial IT technology can be employed to solve your oil and gas processing issues, visit us at www.abb.com/oilandgas.

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