

ControlEdge™ RTU Optimizes Pipeline Operations

Application Note

“With Honeywell’s ControlEdge™ RTU for our multiproduct pipeline, we have achieved secure control of critical operations. This solution offers a small footprint, robust communication, and low power consumption.”

- Project Manager, Major Asia-Pacific Petroleum Refiner-Marketer

Background

A major petroleum refiner-marketer in the Asia-Pacific region operates a network of fuel transportation pipelines serving customers across a wide geographical territory. With costs continuing to be a major obstacle to infrastructure upgrades, it must look to technologies that can create gains in efficiency, productivity, and reliability.



Pipeline operators need process controllers giving them the most advanced remote monitoring, diagnostic and asset management capabilities.

The petroleum firm supplies gasoline and other products directly from its refinery to a fuel storage terminal, and required a robust automation solution for its underground pipeline system. This application necessitated the use of a Remote Terminal Unit (RTU) housed in a compact cabinet and providing powerful processing capabilities. The RTU would be installed in a substation at the end of the pipeline, and as such, had to have a small footprint and low power consumption. It also needed versatile control capabilities for custody transfer and batching applications.

Challenge

Today’s oil and gas midstream demands

operational excellence. The industry is under pressure to lower capital and operating costs, improve capacity availability, and reduce risk. So, wherever petroleum products need to be moved, measured or stored, operators turn to comprehensive measurement and control solutions that will enable them to better manage their assets, and optimize monitoring and maintenance.

For the Asia-Pacific petroleum refiner-marketer, control of its multiproduct pipeline presented challenges such as remote operating locations, limited equipment installation space, and low-bandwidth communications requirements. By utilizing a system designed for easy deployment and reliability in harsh environments, it could simplify management of pipeline equipment while minimizing maintenance and the potential for unexpected downtime.

Solution

The Asia-Pacific petroleum firm chose Honeywell Process Solutions to help optimize the performance and reliability of its fuel pipeline system. On this project, Honeywell supplied the advanced ControlEdge™ RTU solution – a robust, easy-to-commission RTU that is ideally suited to the oil and gas industry. This complete turnkey solution improves management of pipeline assets at lower capital and lifecycle costs.

ControlEdge RTU, enhanced with native redundancy, expanded input/output (I/O) modules and wireless I/O, is a modular process controller that provides complete visibility into the most efficient utilization of distributed assets. The RTU’s configurable, redundant I/O capability provides greater versatility in pipeline applications. It comes with 28 onboard I/O and expansion I/O can be added. Importantly, by having built-in HART, the

Today’s petroleum pipelines necessitate reliable remote monitoring and management. Remote Terminal Unit (RTU)-based solutions can optimize management of distributed assets.

About Honeywell's ControlEdge RTU

Honeywell's ControlEdge RTU is a powerful, modular and scalable controller capable of all remote automation and control applications. The RTU combines a full set of I/O, along with processing and data logging, in a compact and power-efficient unit.



Honeywell ControlEdge RTU Remote Terminal Unit

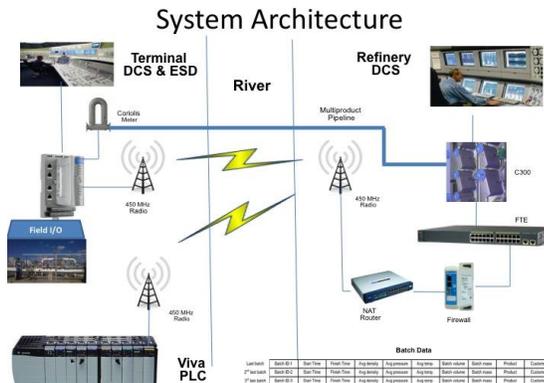
In addition, the RTU's ability to make use of 450 MHz wireless radios supports a highly reliable, yet low-bandwidth radio network. Localized data storage capabilities using SD cards of up to 32 GB ensure critical data is never lost during a communication outage.

ControlEdge RTU also has one of the lowest power consumption profiles on the market. The result of consuming less power is that there is less heat produced. This, coupled with an aluminum body and well-designed thermal paths, means the RTU has less component stress, which equates to higher reliability.

Deployment of the RTU solution on the Asia-Pacific petroleum pipeline was supported by Honeywell engineering and commissioning services, as well as drawings and documentation. Honeywell further assisted with development of a program for product production, and provided solutions for multipoint communication and watchdog protection, as well

controller has no requirement for separate expensive and power-consuming HART I/O modules or third-party components.

as project management and procurement.



System architecture for Asia-Pacific multiproduct petroleum pipeline

Summary

Honeywell has been a respected pioneer in the oil and gas industry for many years. The company has an extensive offering ranging from integrated control and safety systems, to Supervisory Control and Data Acquisition (SCADA) and RTU platforms, field instrumentation, and more.

In this case, Honeywell technology enhanced the ability of a leading Asia-Pacific petroleum refiner-marketer to optimize its pipeline operations. In the two years since configuration and commissioning, the Honeywell RTU solution has not experienced a single issue resulting in system downtime.

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For More Information

To learn more about how Honeywell ControlEdge RTU can improve performance, visit www.honeywellprocess.com or contact your Honeywell Account Manager.

Honeywell Process Solutions

1250 West Sam Houston Parkway South
Houston, TX 77042

Honeywell House, Arlington Business Park
Bracknell, Berkshire, England RG12 1EB UK

Shanghai City Centre, 100 Zunyi Road
Shanghai, China 200051

www.honeywellprocess.com

AP-18-07-ENG
April 2018
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