Case Study

Qatar Petroleum NGL Plant Completes Successful Experion On-Process Migration

“QP NGL Storage & Loading Plant experienced successful Experion® PKS On-Process Migration, along with Control Net Interface to Fault Tolerant Ethernet migration, without disturbing plant operations.”

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Background
QP Petroleum (QP) is a state owned public corporation responsible for all phases of the oil and gas industry in the state of Qatar. Along with its subsidiaries and joint ventures, it is involved in exploration, production and sale of oil & gas, refined products, petrochemicals, liquefied natural gas (LNG), fertilizers, steel, and aluminum.

QP has four natural gas liquids (NGL) plants producing Methane (Fuel gas), Ethane, Propane, Butane and Condensate, used primarily for export through its ship loading facility at the QP NGL jetty.

Challenge
The NGL Storage & Loading Plant never stops operating. Specifically, the NGL tank storage area is always active to meet continuous demand for Ship (tanker) loading at the NGL jetty.

The existing Honeywell DCS was operating on software release R211, using Windows 2000 for servers and Windows Professional for stations. This software set was outside the extended support period, with no current security patch updates available. QP could not tolerate any shutdown or production loss as a result of an upgrade and migration project.

Solution
QP NGL awarded a migration project to Honeywell for the existing DCS system, including upgrading the Control Net Interface (CNI) to Fault Tolerant Ethernet (FTE).

The Honeywell team was challenged to carry out all upgrade and migration activities on process, without causing any plant interruption.

The project included Station and Server hardware upgrades, software release migration to Experion R430, and existing CNI migration to the latest FTE technology. The greatest challenge was migrating CNI to FTE since no tool was available to migrate this technology On-Process.

The Services Project team, consisting of Experion Migration Center of Excellence and local service engineers, developed a project plan that included the following steps:

- Kick off and brainstorming
- Engineering and design
- Hardware and software procurement
- CNI to FTE on-process migration tool development and testing
- Factory Acceptance Test (FAT) for migration from R211 to R430
- On-site system installation
- On-Process Migration
- Site Acceptance Test (SAT) and system handover to QP NGL
- As-built documentation and project close out
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Results
Experion system migration (along with CNI to FTE migration) was completed successfully, without the need for plant stoppage, on time, with technical excellence and customer satisfaction.

QP NGL management recognized the Honeywell Services Project Team for completing the system migration without disturbing plant operations, for special tool development for CNI to FTE on-process migration, and the confidence building measures taken by the team through demonstration and testing of migration tools and processes for successful on-site implementation.

Benefits for Future Migration Projects
As a result of this project, the CNI to FTE on-process migration tool is now integrated into standard Experion migration tool kit, which will help all such future migrations.