Natural Gas Company Builds New Fractionation Plant

A large natural gas transportation and processing company turns to MAVERICK for a new fractionation plant project.

Objective

The natural gas industry is experiencing a renaissance, one that requires quick responses to market conditions. A large midstream company relied on MAVERICK to provide controls system cause and effect diagrams (C&Es), control panel design validation, system programming, factory testing, commissioning and overall project management of controls-related subcontractors to meet an aggressive project schedule for a new plant built within an existing facility.

Results

MAVERICK served as the main automation contractor (MAC), managing all parties and self-executing the project plan to completion. The project was delivered to the field with well-documented and tested logic, which led to a smooth startup. The new fractionation plant was brought online and is meeting the expected performance standard.

Solution

The fractionation plant project included generation of system documentation, controls programming (PLC / DCS / HMI), hardware demonstration testing, software demonstration testing and commissioning for a new plant within an existing facility.

MAVERICK designed the control system architecture for an integrated Yokogawa DCS and Allen-Bradley® safety instrumented system (SIS). The design packages included network architecture diagrams, control panel design, field termination assembly (FTA) cabinet design and loop diagrams.

The MAVERICK team developed control panel hardware factory acceptance testing (FAT) procedures and executed the FAT of Yokogawa-provided hardware as well as panels manufactured by MAVERICK.

The development team developed SIS PLC control logic utilizing the customer's standard ControlLogix® add-on instructions (AOI); Yokogawa Centum VP logic and graphic displays, including an interface to all skids provided by a third party; and configuration of exaQuantum, CAMS and VTSPortal.

MAVERICK performed integrated off-site software testing for the Yokogawa DCS and SIS interface to ensure smooth commissioning.

MAVERICK's Field Services teams completed field terminations for the Yokogawa FTA and SIS cabinets.

Field Services also provided supplemental support to the customer I&E teams for loop checks, instrument calibrations, VFD configurations and initial production coverage.

Development of the commissioning plan included integration with existing shared resources, minimal downtime and appropriate back-out plans.

Deployment and commissioning were performed by the same MAVERICK resources involved in design, programming and testing of systems to ensure continuity of effort and knowledge. In addition, MAVERICK provided around-the-clock coverage for initial operations for a period of 14 days.

MAVERICK was assigned as the owner's representative and was tasked with overall project management for all controls-related aspects of the project. This included management and coordination of the owner's previously chosen subcontractors for process design, instrumentation design, panel design and fabrication, installation and commissioning.

The MAVERICK team also provided operator and maintenance training for the Yokogawa DCS.

The MAVERICK Difference

MAVERICK's ability to provide a turnkey solution and act as the MAC minimized delays and errors that can occur with multiple firms executing concurrent scope. Our Project Complete® methodology promoted clear and concise communications and documentation transfer throughout the project to maintain the highest quality in a timely manner.

MAVERICK® TECHNOLOGIES

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