El Paso Corporation - Colorado Interstate Gas
Trinidad Compressor Station

A Rockwell Automation Company

The Client:

El Paso's interstate transmission system spans the nation, border to border and coast to coast. The nation- wide pipeline system is consolidated into three regional operations.

The Western Pipeline group consists of El Paso Natural Gas Company and Colorado Interstate Gas Company and is headquartered in Colorado Springs, Colorado.

Colorado Interstate Gas (CIG) is a major transporter of natural gas in the Rocky Mountain region. The Colorado Interstate Gas system is connected to nearly every major supply basin in the Rocky Mountains as well as production areas in the Texas Panhandle, western Oklahoma, western Kansas, and Wyoming.

The Requirement:

Hinz was contracted to provide station software integration and commissioning service based on components and methods standardized by CIG for all locations. Hinz provided the required software programming for the SCADA system and the Station PLC.

The control system at Trinidad Station consists of a SCADA system, a Station PLC, a Solar Unit PLC, and a Turbotronic HMI Panel.

The SCADA system communicates to the Station PLC and Unit PLC through a high speed Ethernet link. The Ethernet highway is the network connection to the CIG wide area data acquisition system.

The Station PLC, an AB ControlLogix 1756-L1M3 located in the control room, monitors and controls items not directly associated with the turbine and compressor unit.

The Station PLC coordinates the overall control of the facility and shares data with the Unit PLC via an Allen Bradley DH+ network.

- Centaur 40S/C40, Solar Turbine Compressor
- Anti-Surge Bypass Valve
- Blow Down Valve
- Discharge Valve
- Loading Valve
- Suction Valve
- Building Flame Detector
- Building Gas Detector
- Emergency Generator
- Fuel Gas Analyzer
- Fuel Gas Separator
- Instrument Air Compressor #1
- Liquids Storage Tank
- Station Bypass Valve

The Design Solution:

The design for Trinidad station was based primarily on the existing installation at Douglas,

Wyoming. The scope included:

- Reviewing the electrical and instrumentation drawings and specifications for compliance with CIG standards.
- Generating a Functional Requirements Document (FRD) defining the control and interface requirements for the site. The existing PLC and HMI programs at Douglas station were used as the primary programming design criteria for this project. Hinz prepared a commissioning plan for the Station PLC and Station HMI.
- Providing the required programming to the Station PLC and Station HMI.
- Providing 100 percent in-house testing of the Station PLC and Station HMI prior to a Factory Acceptance Test to CIG representatives.
- Providing100 percent electrical and controls start-up assistance.
- Tracking budget and schedule against submitted hours by WBS codes with detailed task summaries.
- Preparing two bound printed copies of the Station PLC listing and Station FRD and a CD-ROM of all the final software (PLC, HMI, and MMI and station specific documentation generated by Hinz).

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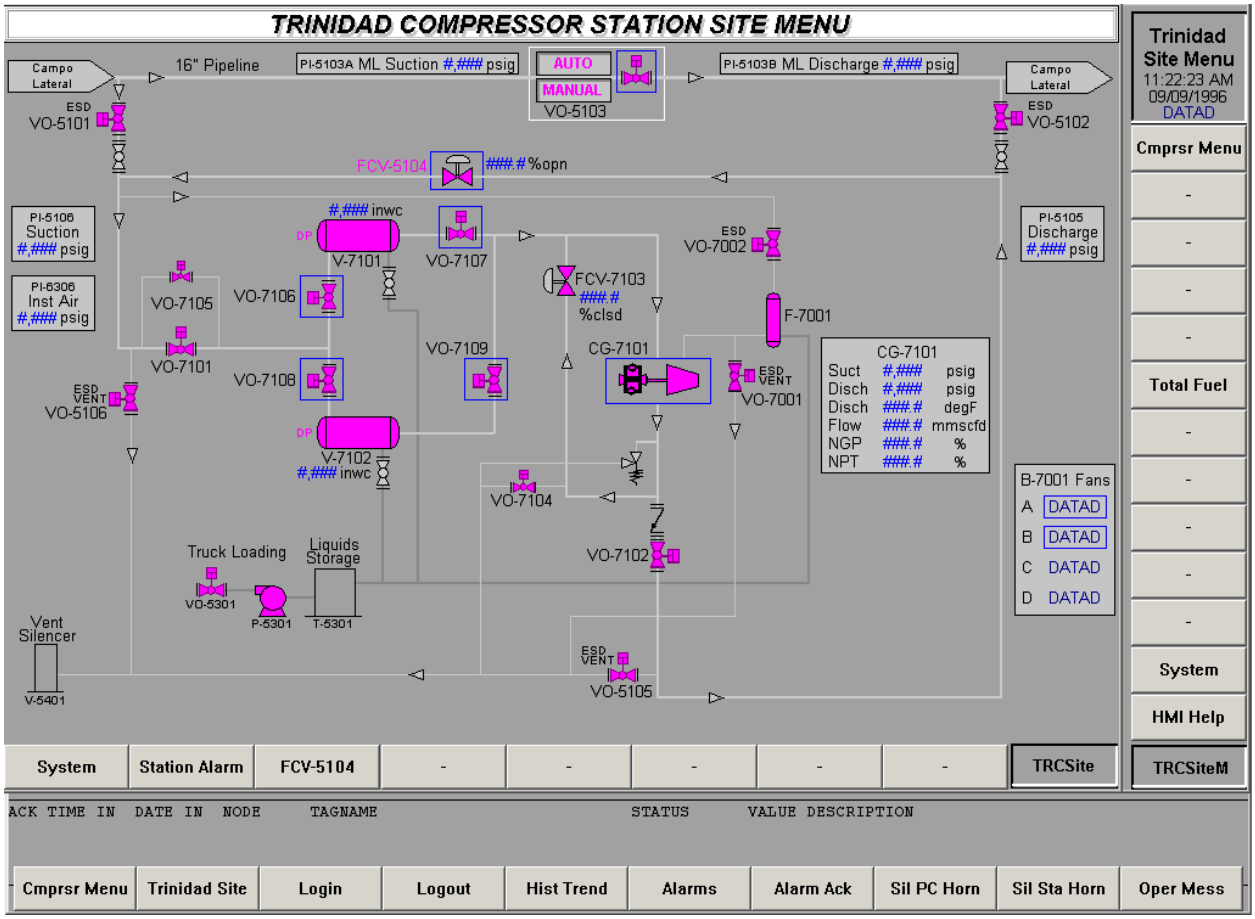

System Specifications:

- (1) Station SCADA node—Intellution FIX32 Version 7.0
- (1) Station ControlLogix 175E—LIM3 PLC
- (1) Solar Centaur 60 Unit AB PLC 5/40C
- (1) Solar Centaur 60 Unit Turbotronic OIT
- Control MT
- OIT
- (4) IR Flame Detectors
- (1) Infrared Gas Detector
- (1) Prosoft Gas Flow Computer
- AB RSLogix 5000 (ControlLogix) Programming software
- AB 6200 Programming Software

For further information or to contact a Hinz office near you, please check our website at:

www.hinz.com