



A Rockwell Automation Company

El Paso Corporation - Colorado Interstate Gas Co. RTU and GC Replacements

The Client:

El Paso's interstate transmission system spans the nation, border to border and coast to coast. The nationwide 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:

At various natural gas pipeline compressor and metering stations, the obsolete Teledyne TC60 Remote Terminal Units (RTU) and old Gas Chromatographs (GC) were to be removed and replaced with new Fisher-

Rosemount ROC-364 RTUs and new Daniel GCs. The FIX32 HMI system database and HMI operations picture screens needed to be revised to read and display the data from the new devices.

The Design Solution:

The RTU-GC replacement was needed for metering at Morton Station, Keyes Station, Flank Station, Latigo Station, Ft. Morgan Station, and Cheyenne Station.

Hinz provided FIX32 HMI system programming to incorporate the new ROC-364 pipeline controls and new gas chromatographs to replace the TC60 RTUs. Previous versions of Intellution FIX32 HMI databases and HMI operations meter screens were already in use at the stations.

Hinz retrieved the existing databases from each site. Hinz then deleted the old database tags and replaced them with new ROC-GC tags using a new format. New HMI operations meter screens were also created. The old operations meter screens were then deleted and replaced with the new screens. Screen functionality was retained to allow the operators to monitor any of the new meter stations in a fashion typical to the existing station functionality.

At some sites, the database was totally replaced by a new database. At other sites, due to the requirement that downtime for the RTU needed to be minimized, the database revisions were merged into the old database and then the old database tags were deleted. At these sites, the obsolete screens were removed after installation of the new screens was complete.

Hinz created new tag group files to animate the new graphics correctly. A new ROC driver was added to the HMI system, and configured to read the ROC and GC data. The screen navigation was also modified to make the new screens accessible to the operator.

The Plant Site Overview screen pages were updated to include indication and control of the new RTUs similar to that currently in use at the plant. HMI alarming functions were revised for the new screens to make required alarms functional and appear on the alarm banner or alarm display.



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Intellution FIX View Help

File View Alarms Commands Applications Options Window

FT MORGAN MS

WITHDRAWAL				EMS Meter No.	Plate Size
				?????	????
				?????	????
				?????	????

	DP	Pressure	Temp	FLOW		ACCUMULATION	
				Volume	Energy	Volume	Energy
RUN 1	?????	?????	????	?????	?????	?????	?????
RUN 2	?????	?????	????	?????	?????	?????	?????
RUN 3	?????	?????	????	?????	?????	?????	?????

INJECTION				EMS Meter No.	Plate Size
				?????	????
				?????	????

	DP	Pressure	Temp	FLOW		ACCUMULATION	
				Volume	Energy	Volume	Energy
RUN 1	?????	?????	????	?????	?????	?????	?????
RUN 2	?????	?????	????	?????	?????	?????	?????

Miscellaneous	
ROC Mode	?????
ROC Temp	????
AC Power	????
DC Voltage	????
Tag Group	ROCFTMA

Previous Day	Text Overview	Site Map	Maintenance	-	-	Previous	Next	ROC_L2
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✓	15:58:03	4/3/02	FTMPC1	FTMBAV020I	COMM	FT. MORGAN 10" PRESSURE
✓	15:58:03	4/3/02	FTMPC1	FTMBAV023I	COMM	FT. MORGAN DEWPOINT
✓	15:58:03	4/3/02	FTMPC1	FTMBAV400I	COMM	FT. MORGAN TO LOCAL FLOW RATE

App	FTM Site	Logic	Logout	Hist Trend	Alarms	Alarm Ask	SILDC Menu	Test Alarm Menu	Oper Menu
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Ft. Morgan Site Menu 4:00:39 PM 4/3/02
Compressor
Plant Menu
Station Flow
Center Field
Storage Field
Local Flow
Stn Flow Cntl
EMS
*
New Sta Flow
New Local
System
HMI Help
FtmSITEM

Stream 1	COMPONENT
?????	Hexane - C6+
?????	Propane - C3
?????	Iso-Butane - IC4
?????	Normal Butane - NC4
?????	Iso-Pentane - IC5
?????	Normal Pentane - NC5
?????	Nitrogen - N2
?????	Methane - C1
?????	Carbon Dioxide - CO2
?????	Ethane - C2
????	Specific Gravity
????	BTU
????	Compressibility
????	Retention Time
?????	Un-Normalized Total
???	Helium - He
???	Oxygen - O2
???	GC Alarm
????	Time of Analysis
????	Date of Analysis

System Specifications:

- Fisher—Rosemount ROC 364 Flow Computers
- Daniel Gas Chromatographs
- Intellution FIX32 HMI Version 7.0

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

www.hinz.com