



A Rockwell Automation Company

TransMontaigne Pipeline Company Bryan Station Upgrade

The Client:

TransMontaigne Inc., based in Denver, Colorado, is a provider of transportation and storage services to oil and chemical companies. TransMontaigne operates pipelines and 70 storage terminals primarily throughout the Midwest and Southeast areas of the United States. Hinz designed and installed a PC based SCADA system for TransMontaigne in 1993 for an

eight inch pipeline that delivers refined products from Hartsdale, Indiana, east to Toledo, Ohio, and west to Fort Madison, Iowa. The pipeline operation monitors and controls 18 meter and pump stations along the 600 mile route from the dispatch control center in Schererville, Indiana.

The Requirement:

TransMontaigne was boosting mainline pressure at the Bryan, Ohio, pumping station using a 50 year old pump and 450 hp electric motor. The pump and motor operated at constant speed and were very inefficient. Startup of the pump was accompanied by a power spike that caused electrical brownouts around the local area.

In order to improve the capacity and efficiency of their operation, TransMontaigne purchased and installed a

new pump with a 700 hp motor and Robicon variable frequency drive.

Hinz was asked to design and program the pumping station control system using Allen-Bradley SLC 5/03 and Wonderware HMI software.

The Design Solution:

Hinz designed new ladder logic for the pumping station providing automatic startup and shutdown sequences, control of suction pressure, discharge pressure, station flow rate, and kilowatts by manipulation of pump speed with an override PID strategy, remote and local monitoring of alarms, remote and local activation of MOVs and pumps, pig tracking, and calibration mode for checking field devices without shutting down the pump. The ladder logic also included communication routines for the Robicon drive and the Square D power demand monitor.

Hinz designed Wonderware screens for monitoring the station, pump and motor details, and control system

status. The control system software was integrated and tested at the Hinz facility in St. Louis. Commissioning in the field was accomplished in three days. Modifications were also made to the RealFlex SCADA system at the control center in Schererville, Indiana to poll and display the new information from Bryan Station.

