



Chevron Research & Development Products

Client: Chevron Research & Technology Company

Location: Richmond, CA



System Features

- Allen-Bradley ControlLogix PLCs
- Wonderware's InTouch HMI Software
- Custom Panel Fabrication (In-House)

Chevron Research and Technology Facility

The Chevron Research and Technology facility at Point Richmond, California exists for the development and improvement of processes for the refining of petroleum products. The research is performed at the facility in batch process "pilot plants", the main purpose of which is to test the properties of various catalysts and other components used in the refining process.

The test materials are pumped through a series of reactor furnaces, and the resulting material is extracted at the end and evaluated. The information derived from this research helps Chevron improve the petroleum refining process and make better use of raw materials.

Transdyn provided project management and engineering, applications programming, testing, training and start-up services for over a dozen systems, with each system controlling up to 4 pilot plants. The pilot plant control systems installed by Transdyn utilizes Allen-Bradley ControlLogix, each interfacing with a workstation running Wonderware's InTouch HMI software.

The pilot plant control logic includes Temperature Zone monitoring, Temperature Zone control, Pressure and Flow control, and a multi-step "Ramp-Soak" profile for temperature control in the reactors. Another feature of the control logic is a Power Fail delay, which allows the operator to define the length of time that a pilot plant power outage could last without affecting the outcome of an experiment.

Other control features include an interface with a gas chromatograph, which samples and analyzes the materials in process, and calculates automatic temperature setpoints for the reactors. The control systems also interface with weigh scales, used in the process to measure the amount of test material used during the batch tests.

Chevron Products Co.

Transdyn has been working with the Chevron Products Co. at the Point Richmond Refinery for over fifteen years providing custom panels. Transdyn worked closely with Chevron's design team in order to adapt to Chevron's CAD standards. This allows for a seamless environment when modifying and generating panel drawings to be submitted and maintained by Chevron personnel.

Transdyn provided custom panels ranging from small specific gravity analyzer racks to large three (3) sided shelters housing instrumentation panels with associated conduit and piping runs.