

PORTABLE DATA ACQUISITION SYSTEM

Brief Description:

Emerging Technologies, LLC. was called upon to configure a customer purchased data acquisition system and train the users how to configure and operate the system.

The system utilizes a portable, multi channel, data logger and a variety of different analog sensors. The stored data is retrieved from the data logger via a notebook computer. Using the computer, the operator can also view real time data. Math channels were configured as well.

Multiple signal types were used; thermocouple, 4 – 20 mA, 0.1 – 5.1 VDC, 0 – 10VDC, and mV strain gauge.

Sensors included, type "J" thermocouples, pressure transmitters, turbine flow meters, string pot displacement sensor, load cells, and accelerometer.

Components Used:

- Panasonic Notebook Computer.
- IO Tech LogBook/360.
 - ✓ Dynamic Input Module.
 - ✓ Universal Current/Voltage Module.
 - ✓ Thermocouple Module.
 - ✓ 80MB Solid State Memory Card.
- Setra 5000 PSI pressure transmitters
- Ametek/Patriot Sensors Draw Wire Transducer.
- Kistler Instrument Accelerometer.
- Flow Technology, Inc. Flow Meters.

Software Used:

- IO Tech LogView.
- DIADEM View.



Analysis Software:

DIADEM View software, provided with the IO Tech LogBook/360, was used for post DAQ analysis. Graphs and data tables are used to review and compare data. Line graphs can be overlaid and compared in time.

Customer Benefit:

The customer was able to focus on the design of the system as well as other plant activities while capitalizing on Emerging Technologies expertise in data acquisition system development.

This approach reduced the demand on plant resources time and effort to complete the project by utilizing personalized support and training from Emerging Technologies, LLC.

Emerging Technologies, LLC.

Responsibilities:

- Functional Specification Generation
- Design / Engineering
- Fabrication
- ✓ Programming – Software
- Programming – Firmware
- Field Installation
- ✓ On-Site Commissioning
- ✓ Post Commissioning Support
- Other

Technologies:

- Embedded Computers
- Microcontrollers
- Visual Software
- Control Software
- ✓ Data Acquisition
- Computer Based Control
- Communications
- System Integration
- Other

Customer Category:

- OEM
- ✓ Industrial Manufacturer
- Custom Equipment
- Utility
- R&D

SPECIALISTS IN TEST, MEASUREMENT, AND DATA ACQUISITION

Emerging Technologies, LLC.

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