APPLICATION NOTE

CAS DATALOGGERS

Oil Refinery Uses Standalone Data Logger to Help Increase Efficiency

dataTaker Automates Data Collection and Transfer

CAS DataLoggers provided the automated data collection and transfer solution for a crude oil refinery which wanted a standalone data logger to take thermocouple readings in several their observation wells. These shafts are connected to the refinery via extensive pipelines for subsequent processing. Management stressed that alarming features were important–sudden temperature spikes during crude extraction could cause a rupture, while sudden drops lowered pumping efficiency.

Installation

The refinery installed 3 dataTaker DT82I Intelligent Industrial Data Loggers into industrial enclosures which CAS DataLoggers also provided. These enclosures are fitted with both external and through ports and each connected to 4 thermocouples located at several points at spaced intervals down-hole. Each well's temperature is now continually monitored, and the operation adjusted to fine-tune conditions for optimum pumping. The dataTakers are left in standalone operation to record and save each well's temperatures and use FTP to transmit all their collected data to a remote office PC.

USAGE

Each dataTaker DT82I data logger allows up to 4 isolated analog inputs to be used in several different combinations. The fully isolated channels prevent any cross-channel interference, which results in greater accuracy.

Each DT82I is a single solution featuring FTP and Web interfaces, support for Modbus sensors and SCADA systems, and switchable, regulated outputs to power sensors. Additionally, the data logger's digital I/O channels and high-speed counters can be used to monitor equipment status or to count events or pulses.

Users can overwrite or finish logging once allocated memory is filled, archive data on alarm event, copy to USB memory and transfer via FTP which provides data via an Ethernet network or mobile phone network. With dataTaker, users don't need separate polling or specific host software.

Additional communication features for the DT82I industrial data logger included connecting via RS232 or Ethernet or connecting remotely through a modem or over the Internet. The web interface allows users to configure the DT82I, access logged data and see current measurements as dashboards or in a list using a web browser. Supervisors use the dataTakers' built-in web and FTP servers to remotely access logged data and all configuration and diagnostics, while USB memory stick support is included for easy data and program transfer. Each DT82I can store up to 10 million data points for extended logging, ensuring that the memory never runs out during operations.

With dataTaker's famously rugged construction, the data loggers offer 24/7 operation even under the extreme conditions and occasional rough handling in the field. The devices have already survived a few drops and spills.

Meanwhile, dataTaker's intelligent alarm capabilities ensure that any increase or decrease in temperatures outside specification is immediately reported over FTP to selected emails and mobile devices. This makes for a safer work environment and more efficient operations.

Benefits

The refinery realized several benefits following the installation of their dataTaker data loggers. The systems' standalone, low-power operation made them reliable solutions, while periodic FTP downloads made data collection fast and easy. The DT82I data loggers have also increased ease of access to the data recorded from the oil wells, storing data in convenient CSV format for later analysis and presentation with spreadsheet programs like Excel.

For more information on the dataTaker DT82I Intelligent Data Loggers, standalone data loggers or to find the ideal solution for your application-specific needs, contact a CAS DataLogger Application Specialist at **(800) 956-4437** or www.DataLoggerInc.com.