APPLICATION NOTE

CAS DATALOGGERS

Automated Data Collection Reduces Errors

Manual Recording vs Data Logger

Humans make errors…it is a well-known fact.

Accurate production data is of critical importance to many manufacturing companies. Quality control best practices and production traceability requires error-free data collection from many manufacturing processes, including heat treat ovens and cold storage of raw materials. Elimination of recording errors, data entry errors, and reduction of labor costs while increasing accuracy and quality of data is a recent application requirement presented to CAS DataLoggers. The recommended solution of the dataTaker DT85 Universal Input Data Logger provided measurable results to the client.

Installation

CAS DataLoggers converted a manufacturer's manual paper and pencil-based process to automated data collection using dataTaker industrial data loggers. The customer has multiple, stationary heat-treating ovens. Previous procedures required an employee to periodically read temperature values from controller displays and manually record them on paper forms. Likewise, they had multiple freezers for storage of raw materials used in the fabrication of composite parts which relied on paper logs of handwritten temperatures obtained from a display on the freezer.

In the case of the ovens, a dataTaker DT85 Data Logger was installed using repeated signals from the existing temperature controllers as inputs. Process temperature data is now recorded automatically without the need for human intervention. For the freezers, a new RTD temperature probe was installed inside with the cable routed through an existing port in the back. Each data logger is connected to the plant Ethernet network, and data is automatically pushed via FTP to a local server for reporting and historical archiving.

Usage

Using the free dEX-2 software supplied with the data loggers, quality engineers can access the live data over the network for remote monitoring. If a power disruption occurs, the logger can continue to operate on its internal battery and record data. Afterward, the electronic temperature record allows engineers to determine where the cycle was interrupted therefore allowing them to restart without repeating or missing process steps. Or, in the case of the freezers, to determine if the temperature ever got outside the recommended storage zone - even if the disruption occurred when no one was in the plant.

A key feature of the DT85 data logger is the universal analog input which allows it to accept a wide variety of signals from different types of sensors and equipment including thermocouples and RTD's for temperature measurement, DC voltage, 4-20 mA process current signals, and much more. In addition to offering automated data collection, the data logger also offers programmable limits which, when combined with its digital outputs allows local visual or audible alarms if a measurement strays outside of the desired range.

Furthermore, the logger can send email alerts for these alarms allowing immediate notification if nobody is nearby.

Benefits

The automated data collection enabled by the DT85 offered a number of immediate benefits to the customer. The accuracy of the recorded data was greatly improved while errors and missing data were virtually eliminated. The electronic records simplified traceability, made archiving much easier, and allowed quality improvements. Finally, continuous monitoring, even when no one was around, and the ability to send immediate email notifications if something was out of tolerance reduced scrap and lost materials.

For more information on the DT85 Universal Input Data Logger, or to find the ideal solution for your application-specific needs, contact a CAS DataLogger Application Specialist at **(800) 956-4437** or request more information.