DATA TRANSLATION ®

Furnace/Oven Temperature Uniformity Surveys using TEMPpoint

Background:

Industrial process furnaces and ovens require uniform temperature and heating; This is critical to repeatable product performance from batch to batch. These furnaces require periodic inspection for temperature uniformity.
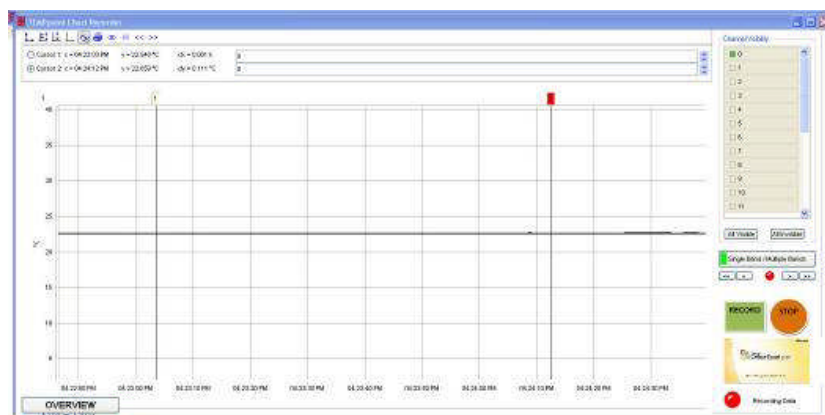

Multiple temperature readings being taken in furnace for testing temperature uniformity

Application:

Electronic and Mechanical Calibration Services, Millbury Massachusetts characterizes temperature uniformity in industrial furnaces and ovens for their customers. This is accomplished by measuring temperature in several locations throughout the furnace and monitoring temperature with thermocouples over time according to AMS 2570D specifications.

The customer previously used chart recorders which require constant monitoring while the survey is running. Surveys can run anywhere from 35 minutes to several hours long depending on the industry specified requirements. With the TEMPpoint solution the operator can set it up and let it run unattended, freeing them up to multitask their time and work more efficiently. The shipping TEMPpoint application required very little modification using Measure Foundry and now fulfills customer's requirements.
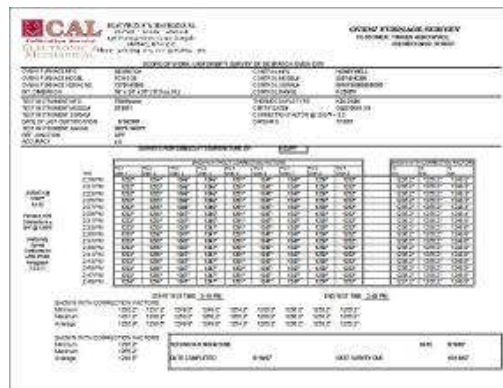

Screen grab of modified TEMPpoint application used for temperature uniformity application.

Paul O'Malley,

President of Electronic & Mechanical Co.

TEMPpoint/Measure Foundry solution:

- Graphs signals in chart recorder view and monitors temperatures' digital read out in complete channel overview.

- Records all channels simultaneously every two minutes directly to comma delineated file (.csv) into their Excel spreadsheet survey.

- All signals are time stamped.

- File is saved with unique name generated automatically from system date and time.

- Graph provides markers to see the time when survey reached desired temperature.

- Software Setup file allows application to be installed and used on any computer.

- Application was simplified to provide a simple operator interface to allow easy setup and operation.

TEMPpoint temperature measurement instrument provides customer with a robust and cost-effective means of evaluating and reporting temperature uniformity surveys.