VAC AERO
INTERNATIONAL INC.

PRODUCT SPECS

Honeywell HC 900 Hybrid

Vacuum Furnace Control System

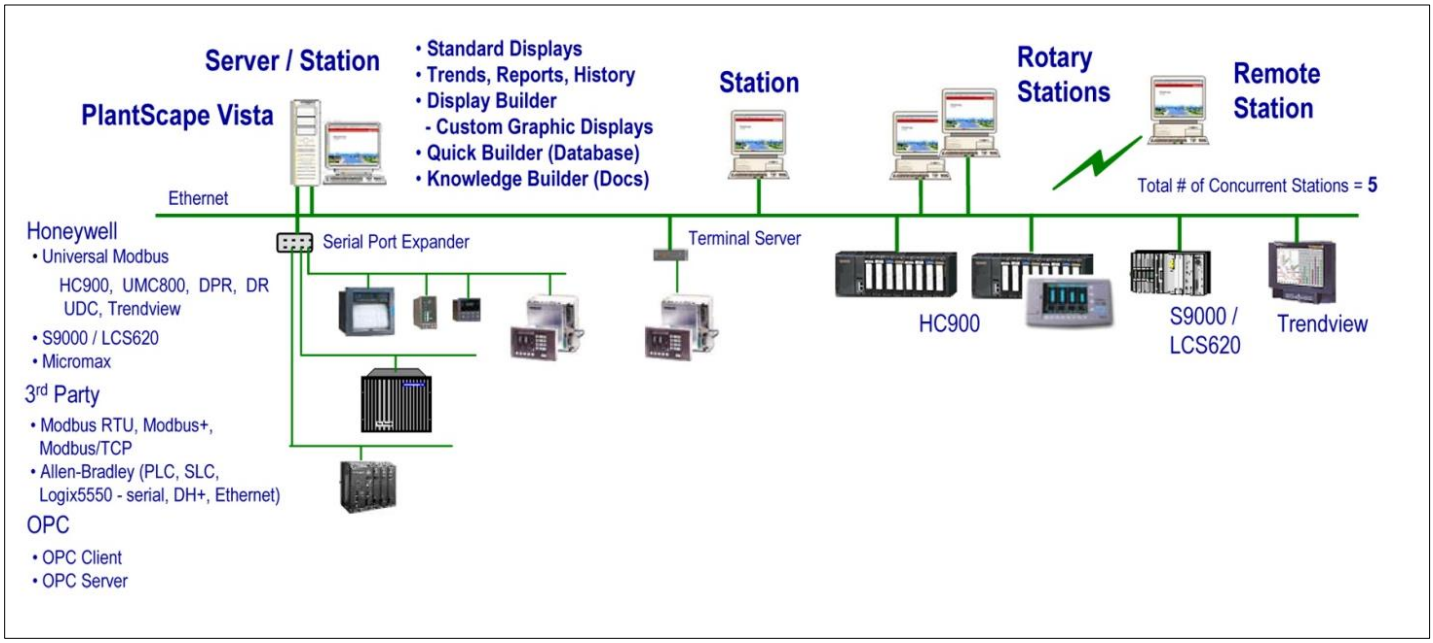
Specifications

Typical VAC AERO hardware/software configuration

- Honeywell's Experion HS SCADA Software
- Televac MC300/MM200 Vacuum Gauge Controller
- Honeywell UDC 3200 Over Temperature Controller
- Computer Interface

Platform

- The system uses the Honeywell HC 900 hybrid controller to manage furnace functions and run Set Point Programmer.
- The HC 900 is integrated with Honeywell's Experion HS to provide supervisory control and data acquisition (SCADA).
- Operator interface is provided through a large, color touch screen.
- Process information is accessible by operators and across a company's network for process engineers, allowing control and monitoring for higher productivity, reduced costs and increased quality.



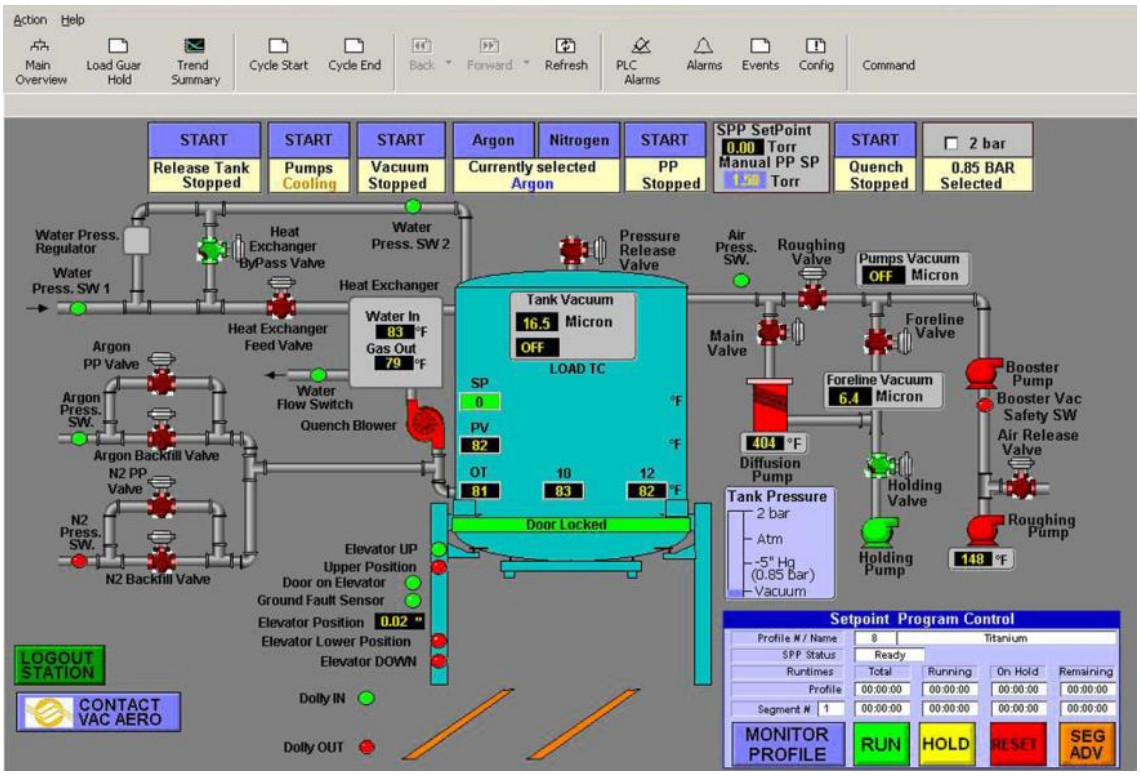
Key Benefits of the HS R400 Hybrid Controller:

- Compatibility with plant wide SCADA and network integration.
- Process cycle validation.
- Extensive alarm and event management and reporting.
- Temperature control using advanced algorithms, auto tuning, and multiple zone digital trimming.
- Operator sign-on/sign-off security provides up to 255 control levels to limit operator control of individual items of plant and equipment.
- Enhanced maintenance and troubleshooting management and trending.

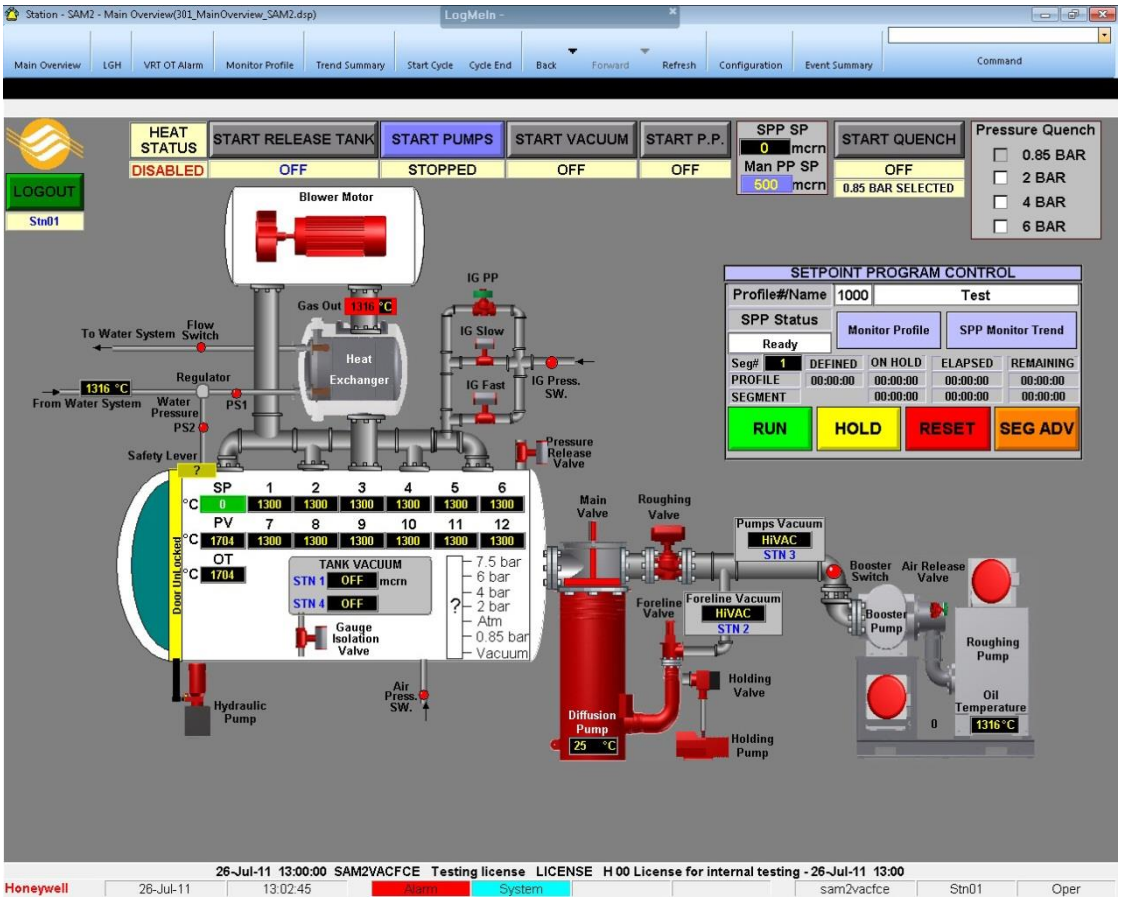
Other Features

- Easily programmable in engineering units.
- Up to 1000 programs, of 2 to 50 segments in length can be stored on the HS server.
- Alarms and events may be programmed to send an e-mail message or call a pager.
- Operator Interface provides user-friendly displays along with local trending and data archiving capabilities.
- Supports direct PC connection or external Modem connection for configuration upload, download, debug and maintenance.
- Alarm / Event Log reports all alarms and events in a specified time period.
- Alarm Duration Log reports the time of occurrence and elapsed time before return-to-normal for specific alarms in a specified time period.
- Batch Reports collect batch data and load detail information, history for a set of points (up to 50) and events that occurred relative to a process production run.
- Reports may be generated periodically, or on an event-driven or demand basis.
- History collection is available over a wide range of frequencies in both average and snapshot/production formats.
- Flexible Trend Configuration allows users to configure up to 3000 Trend templates. Real-time and historical data are presented together on the same trend.

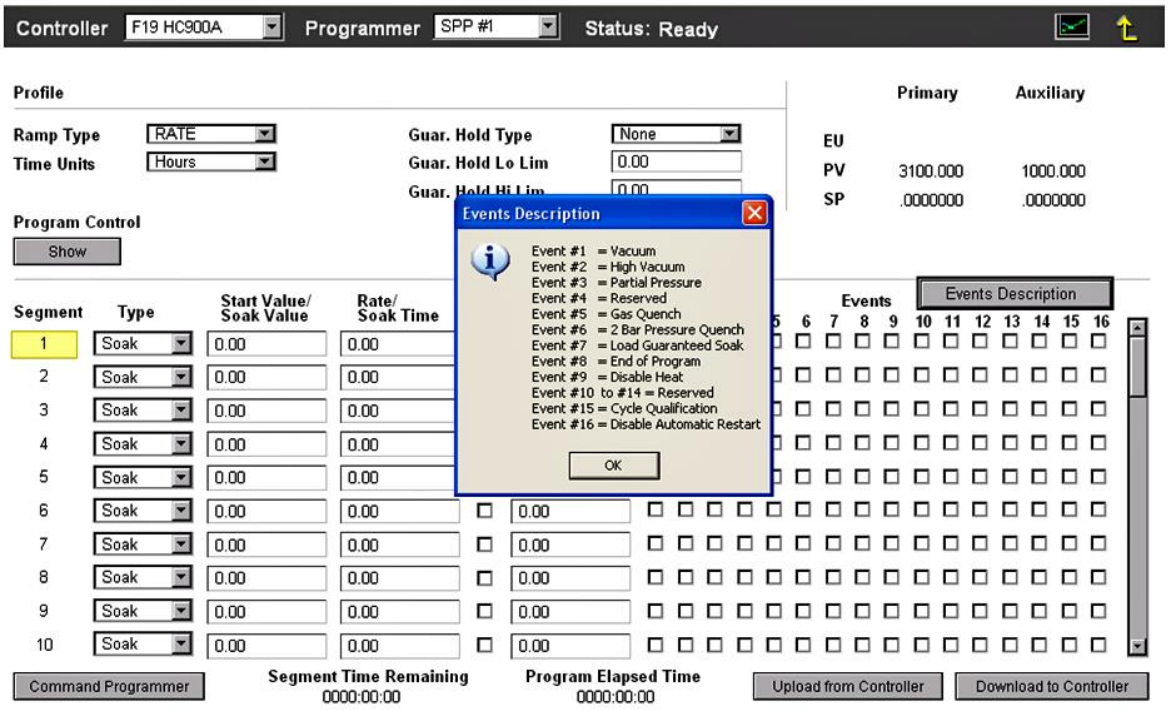
Typical VAC AERO Control Cabinet



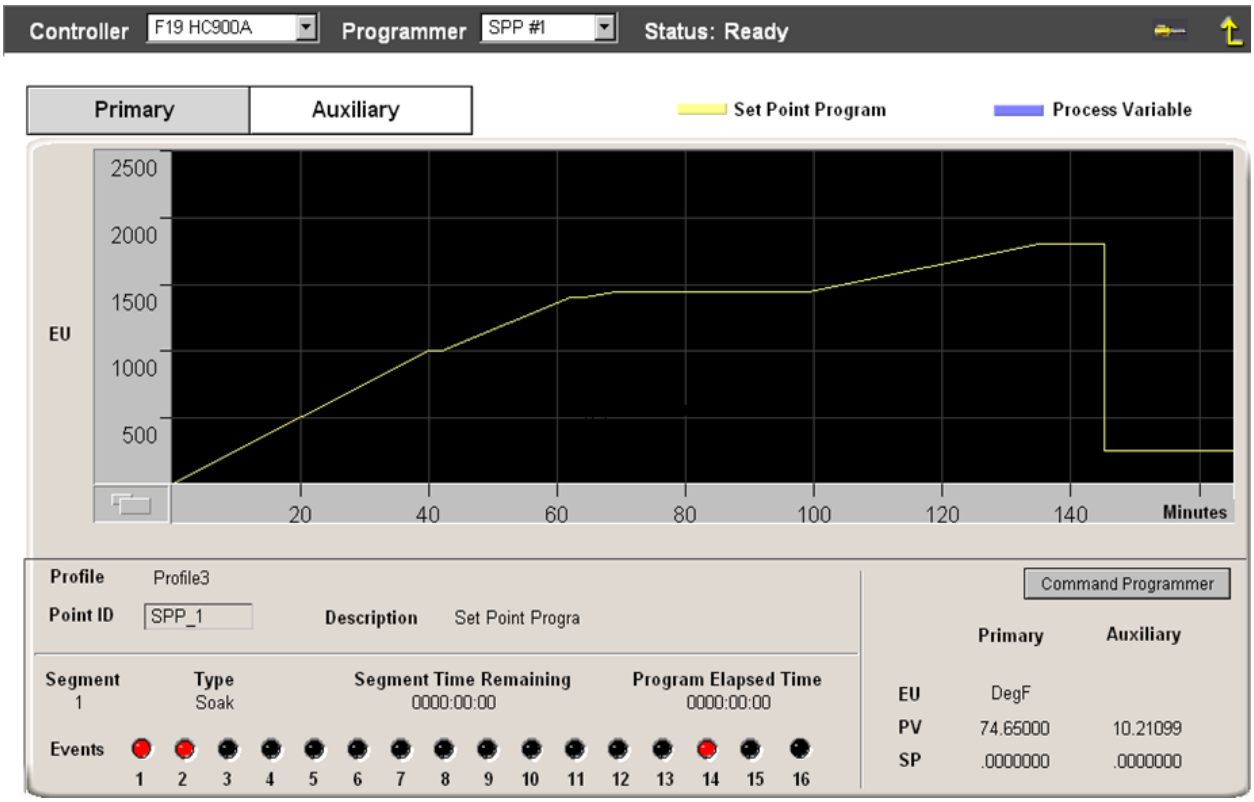
Main Overview Vertical Furnace



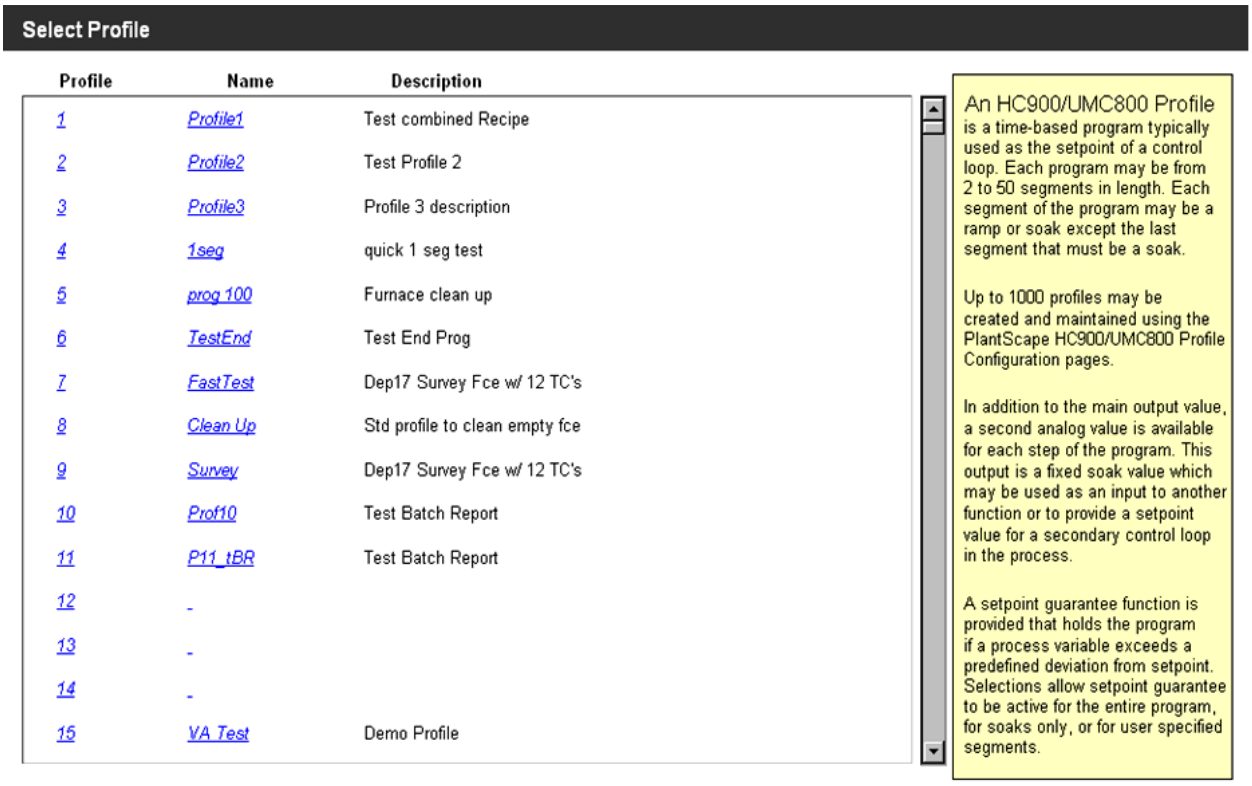
Main Overview Horizontal Furnace



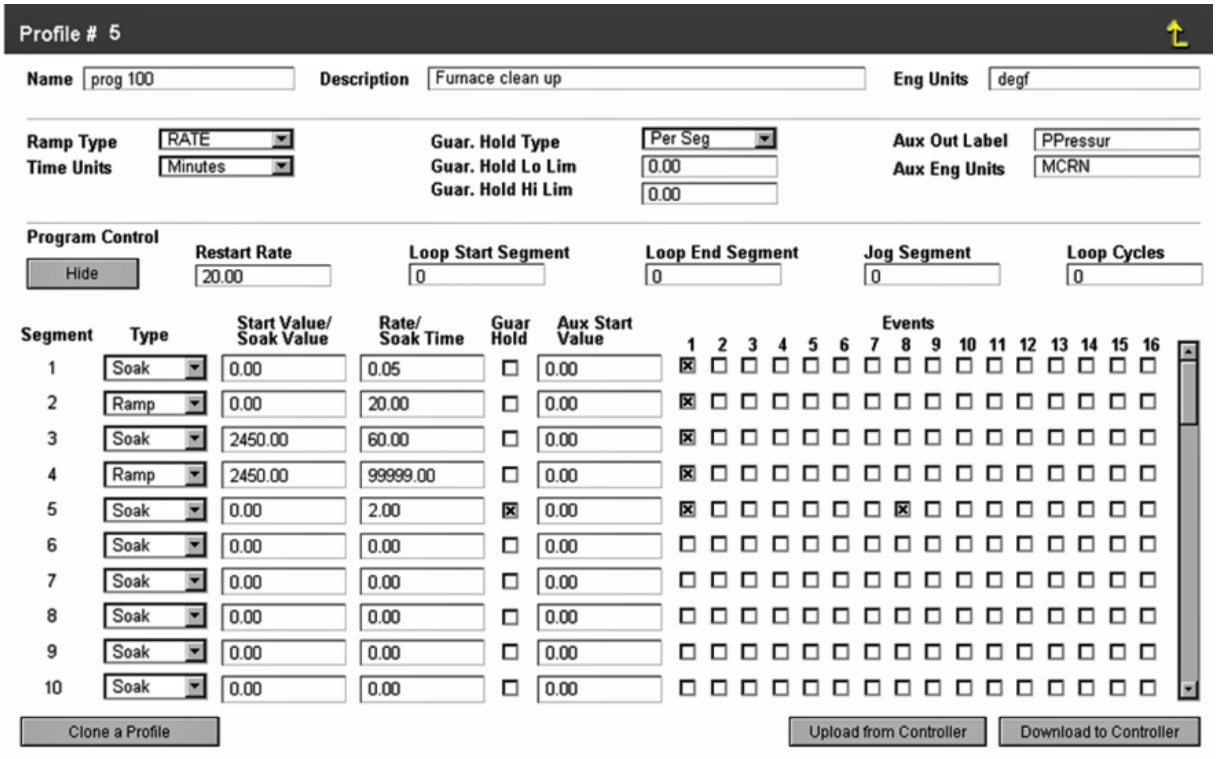
Monitor Set Point Profile (Program)



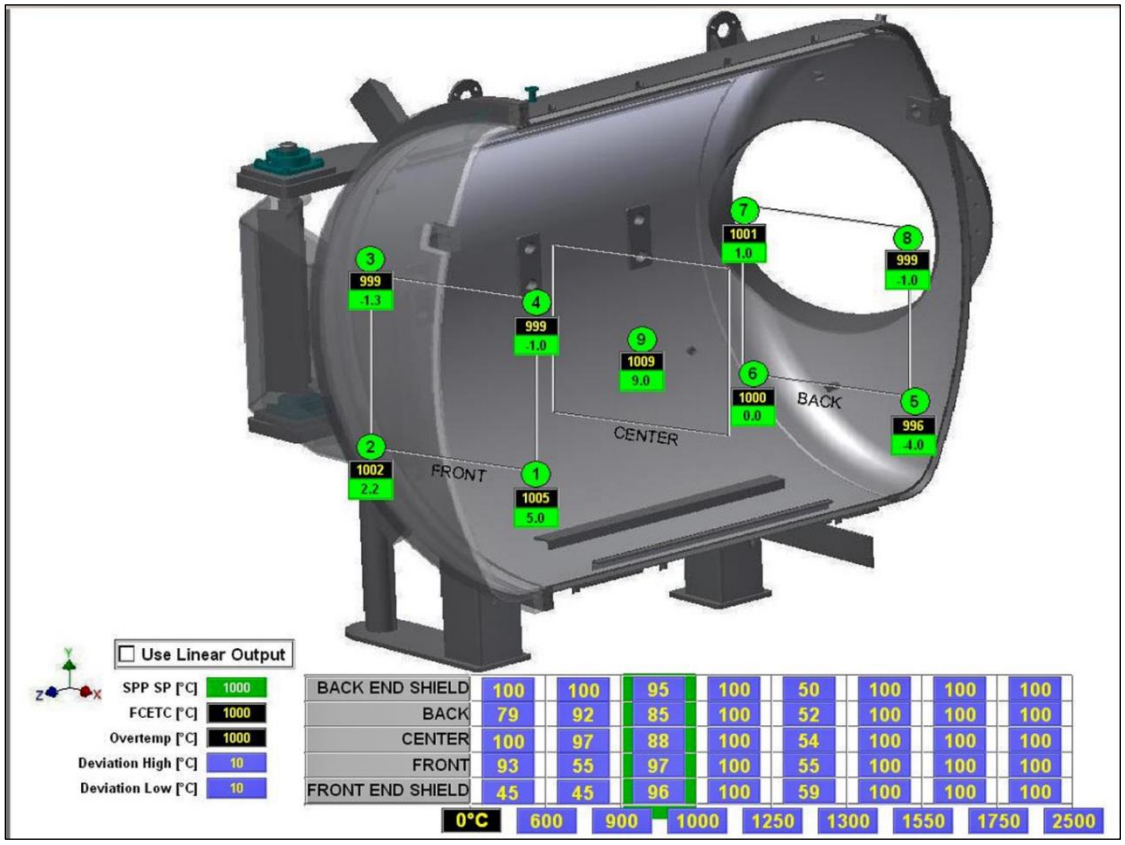
Monitor Set Point Profile (Program) – Trending



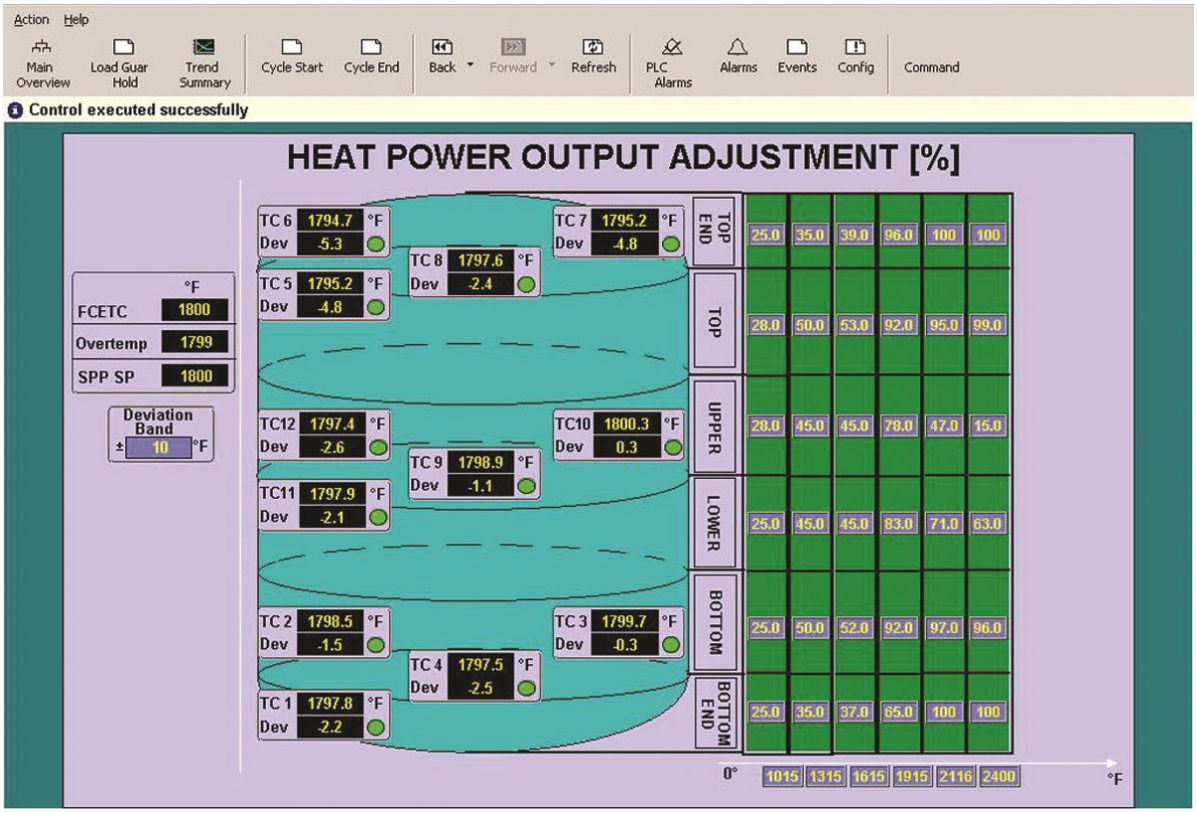
Profile (Program) Selection for Editing, Creating New Profile



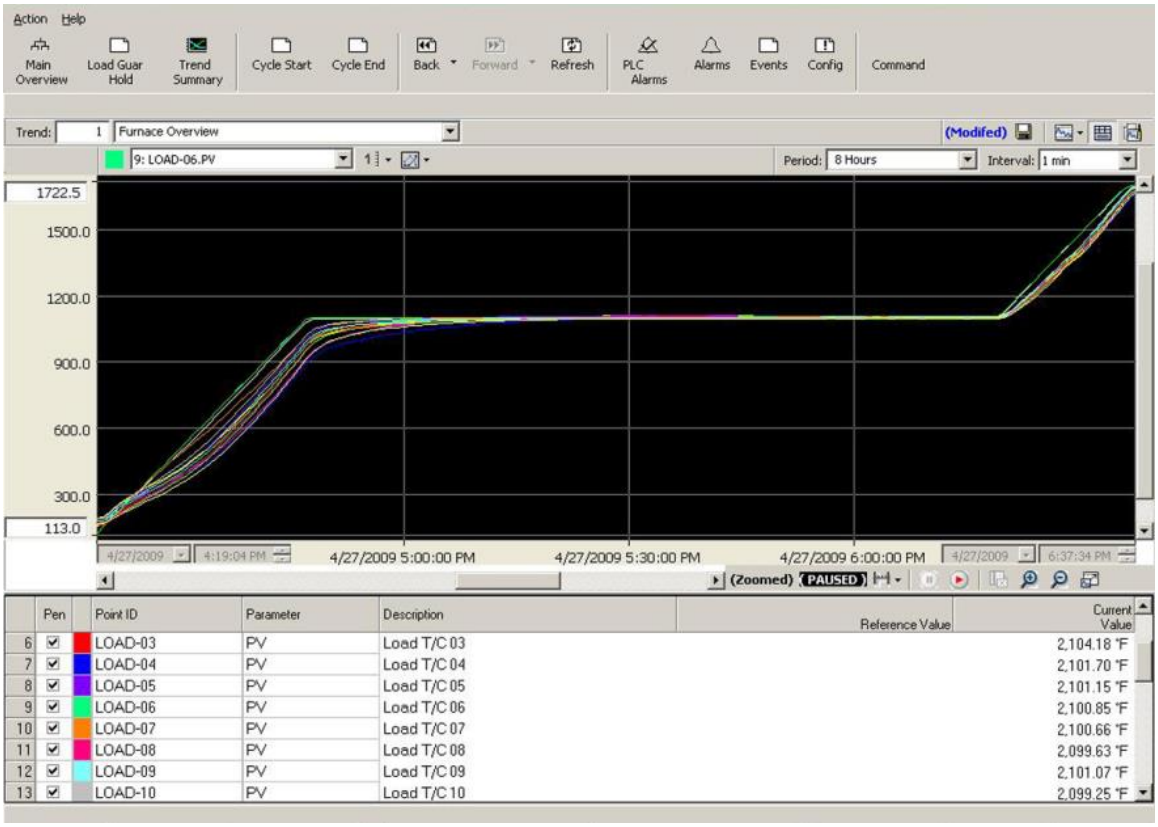
Profile (Program) Definition



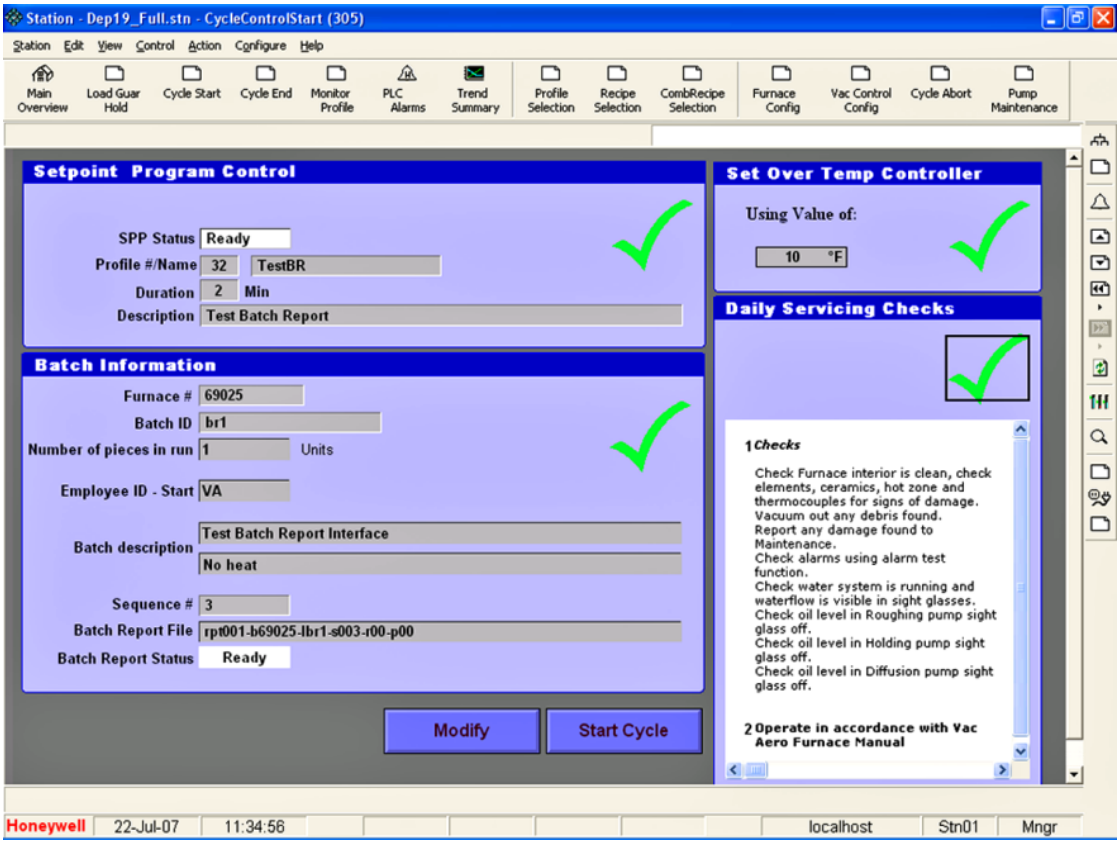
Digital Trimming



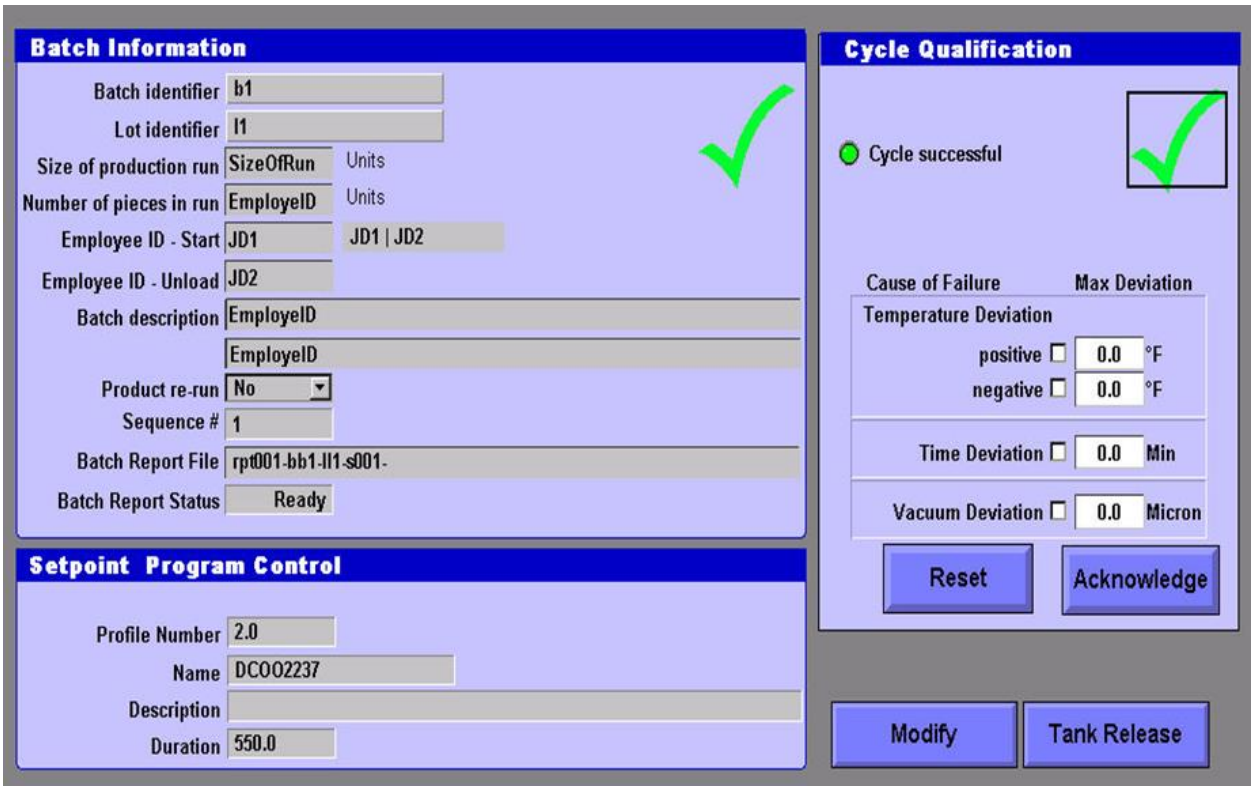
Heat Power Adjustment Screen



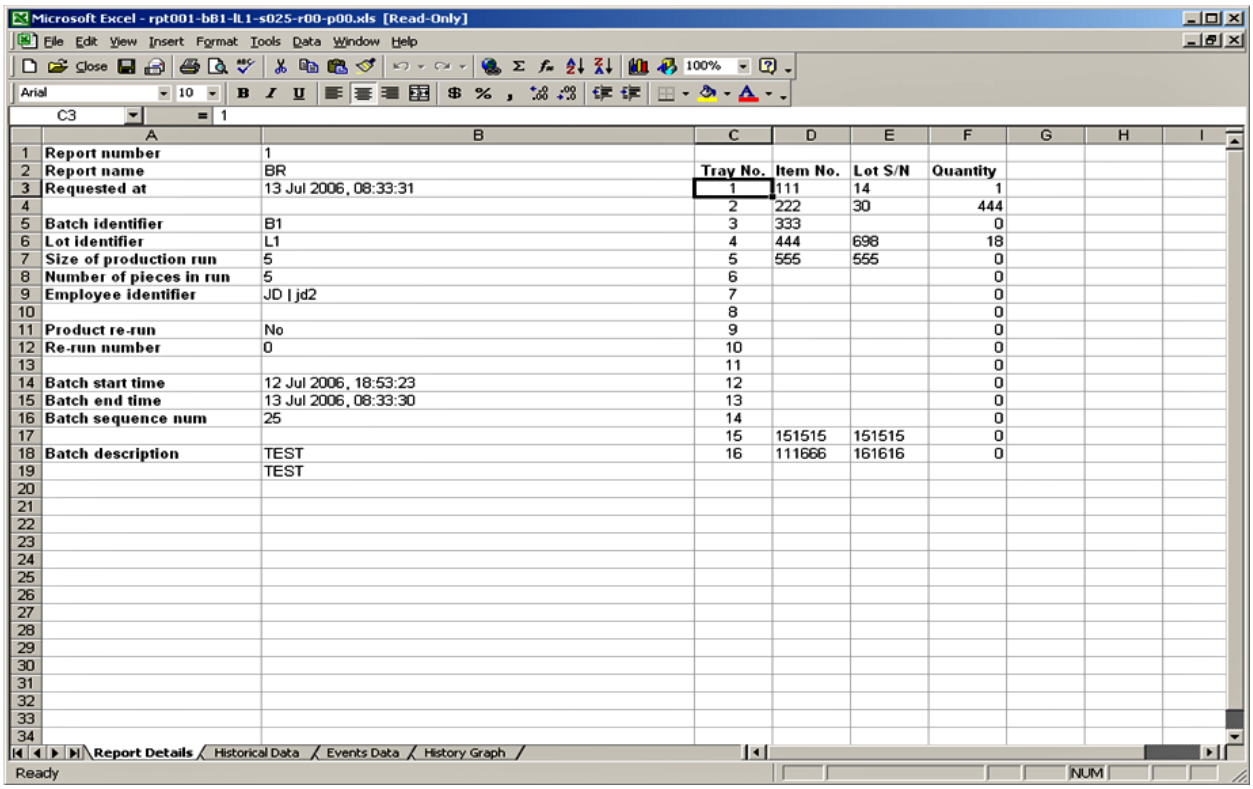
Trend Screen Example



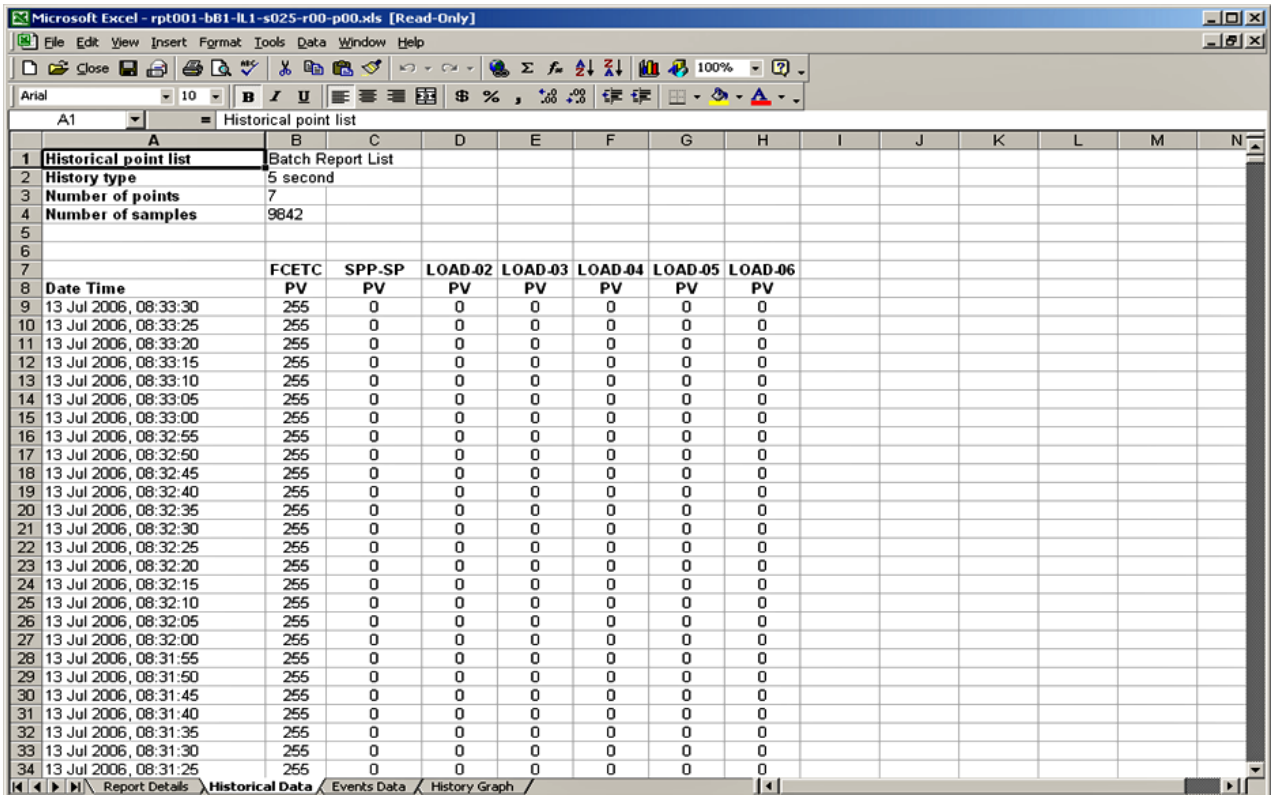
Start Cycle Interface with Batch Information



Cycle End Interface with Batch Information



Excel Batch Report – Report Details



Microsoft Excel - rpt001-bB1-lL1-s025-r00-p00.xls [Read-Only]

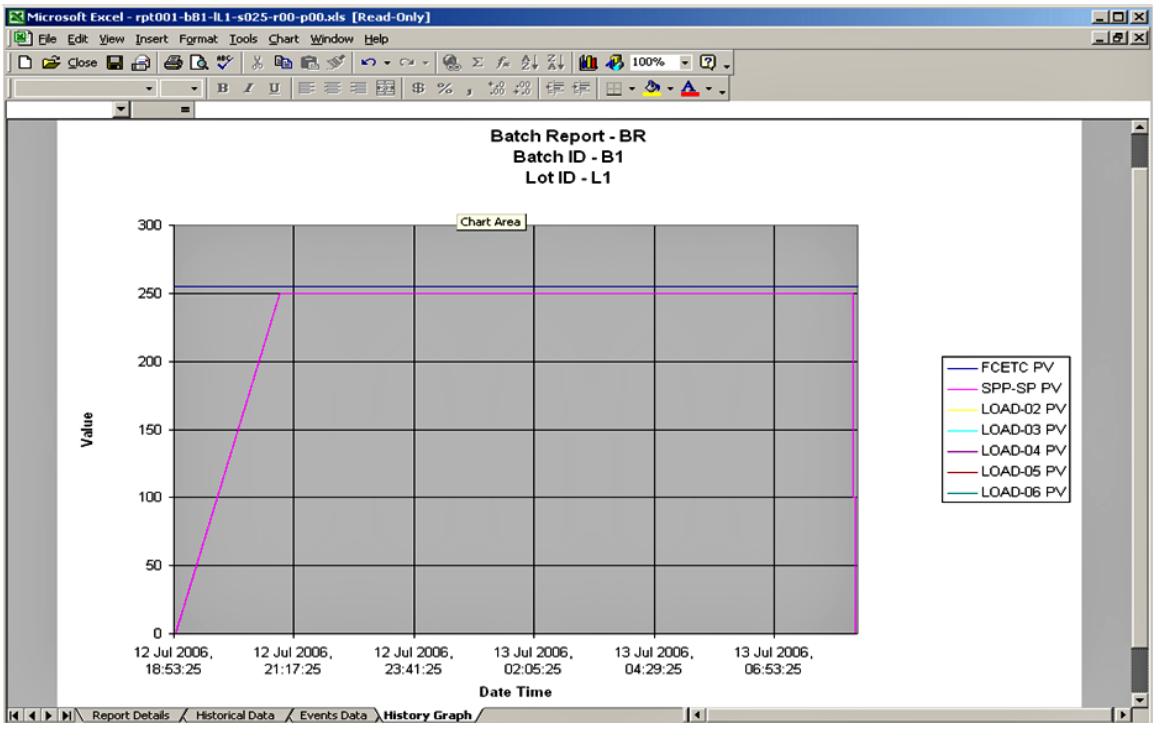
File Edit View Insert Format Tools Data Window Help

A1 = Historical point list

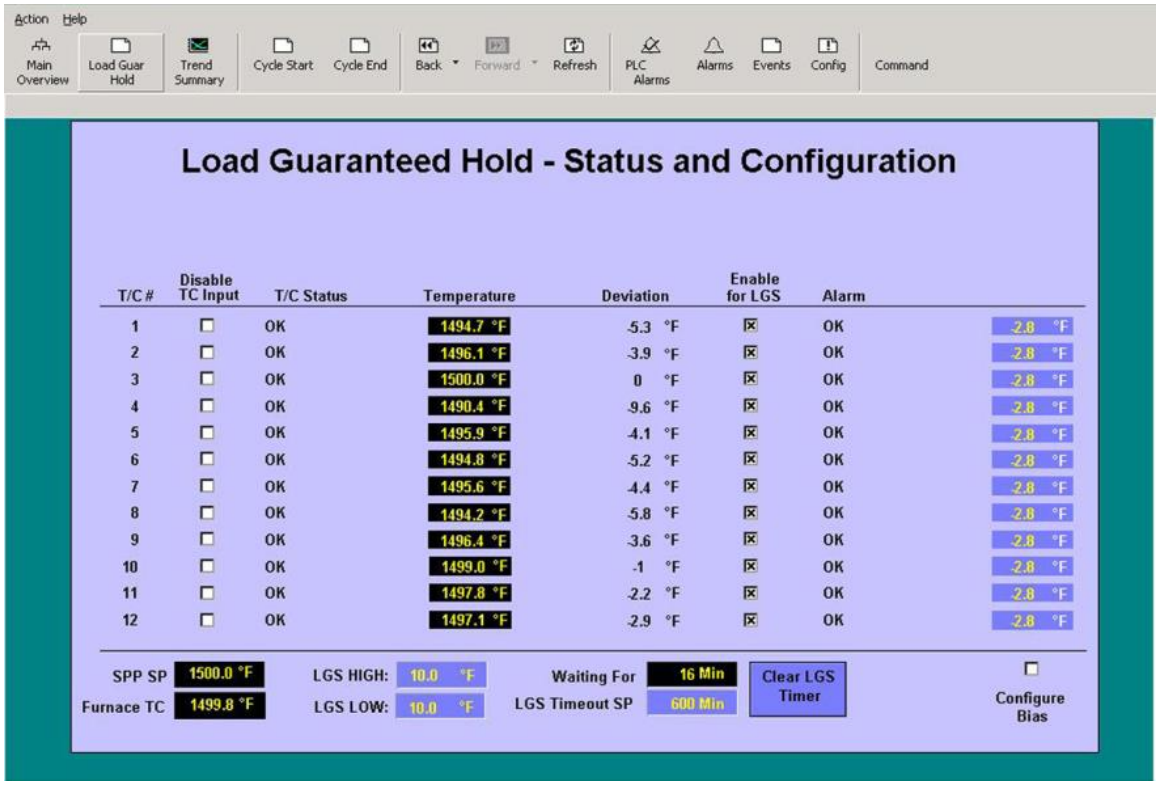
	A	B	C	D	E	F	G	H
1	**Historical point list**	Batch Report List						
2	**History type**	5 second						
3	**Number of points**	7						
4	**Number of samples**	9842						
5								
6								
7		FCETC	SPP-SP	LOAD-02	LOAD-03	LOAD-04	LOAD-05	LOAD-06
8	**Date Time**	PV	PV	PV	PV	PV	PV	PV
9	13 Jul 2006, 08:33:30	255	0	0	0	0	0	0
10	13 Jul 2006, 08:33:25	255	0	0	0	0	0	0
11	13 Jul 2006, 08:33:20	255	0	0	0	0	0	0
12	13 Jul 2006, 08:33:15	255	0	0	0	0	0	0
13	13 Jul 2006, 08:33:10	255	0	0	0	0	0	0
14	13 Jul 2006, 08:33:05	255	0	0	0	0	0	0
15	13 Jul 2006, 08:33:00	255	0	0	0	0	0	0
16	13 Jul 2006, 08:32:55	255	0	0	0	0	0	0
17	13 Jul 2006, 08:32:50	255	0	0	0	0	0	0
18	13 Jul 2006, 08:32:45	255	0	0	0	0	0	0
19	13 Jul 2006, 08:32:40	255	0	0	0	0	0	0
20	13 Jul 2006, 08:32:35	255	0	0	0	0	0	0
21	13 Jul 2006, 08:32:30	255	0	0	0	0	0	0
22	13 Jul 2006, 08:32:25	255	0	0	0	0	0	0
23	13 Jul 2006, 08:32:20	255	0	0	0	0	0	0
24	13 Jul 2006, 08:32:15	255	0	0	0	0	0	0
25	13 Jul 2006, 08:32:10	255	0	0	0	0	0	0
26	13 Jul 2006, 08:32:05	255	0	0	0	0	0	0
27	13 Jul 2006, 08:32:00	255	0	0	0	0	0	0
28	13 Jul 2006, 08:31:55	255	0	0	0	0	0	0
29	13 Jul 2006, 08:31:50	255	0	0	0	0	0	0
30	13 Jul 2006, 08:31:45	255	0	0	0	0	0	0
31	13 Jul 2006, 08:31:40	255	0	0	0	0	0	0
32	13 Jul 2006, 08:31:35	255	0	0	0	0	0	0
33	13 Jul 2006, 08:31:30	255	0	0	0	0	0	0
34	13 Jul 2006, 08:31:25	255	0	0	0	0	0	0

Report Details | **Historical Data** | Events Data | History Graph

Excel Batch Report – Historical Data

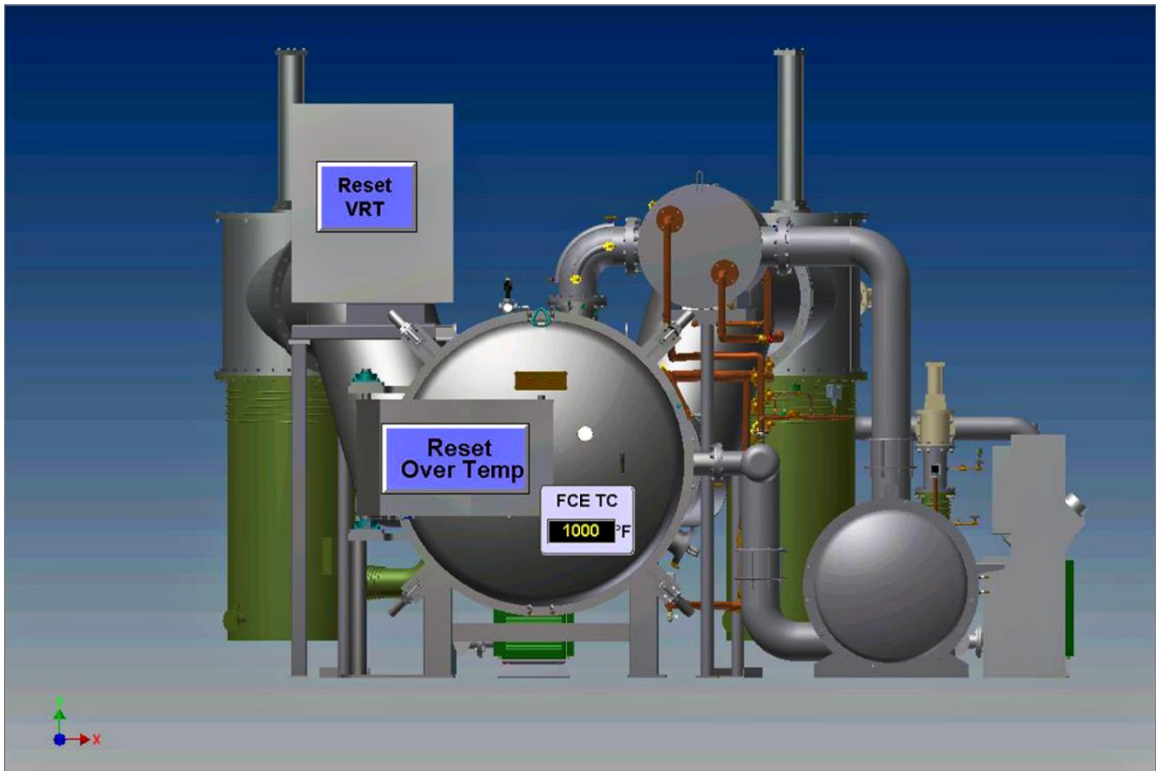


Excel Batch Report – History Graph

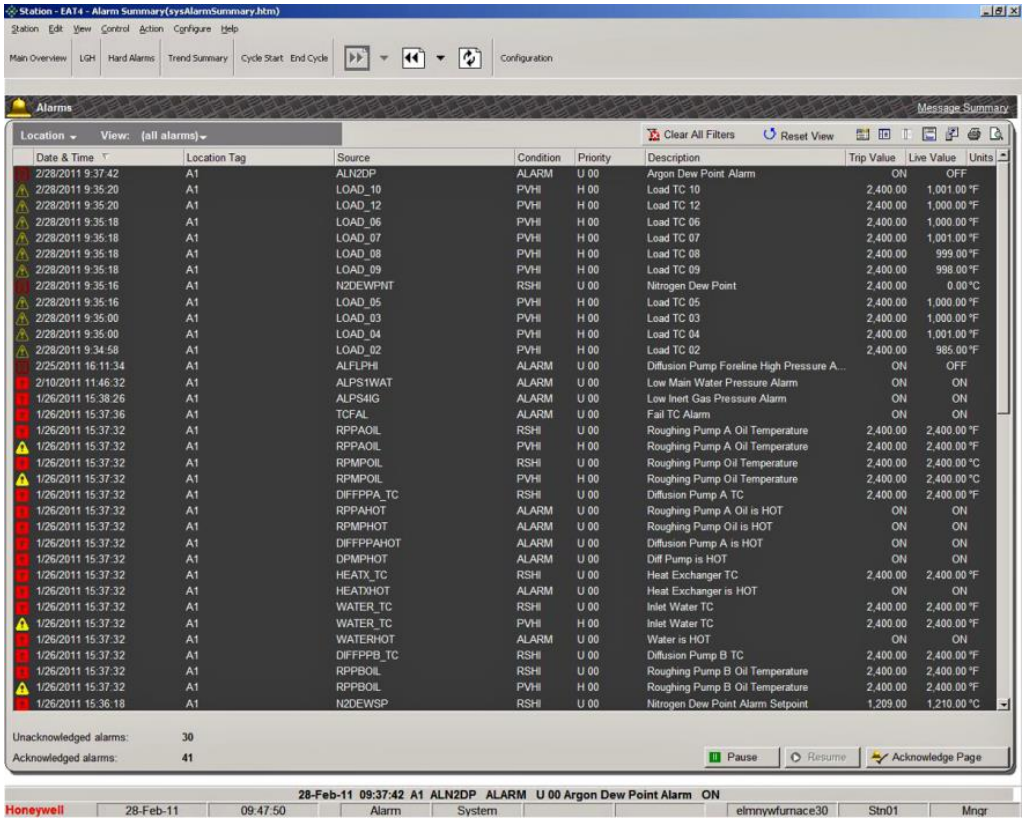


Load Guaranteed Hold Status & Configuration Screen

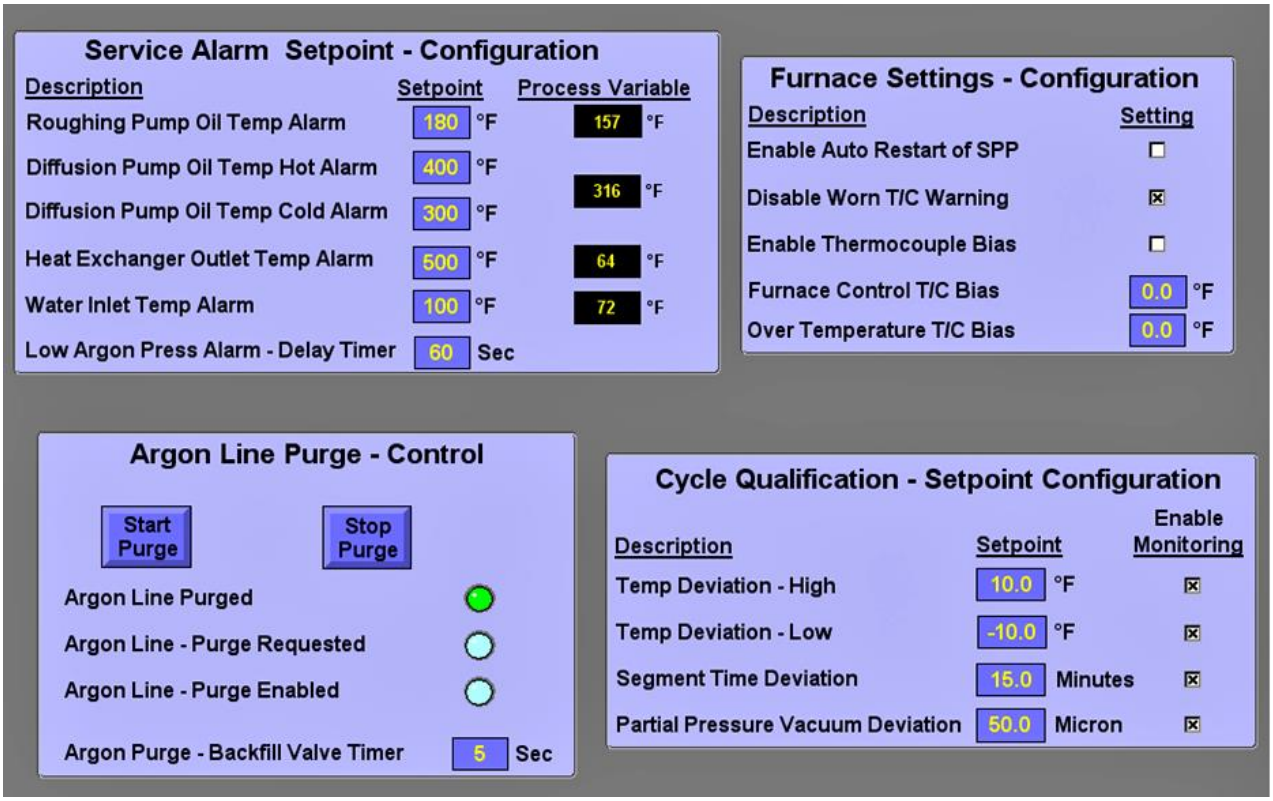
Pumps Maintenance - Timers



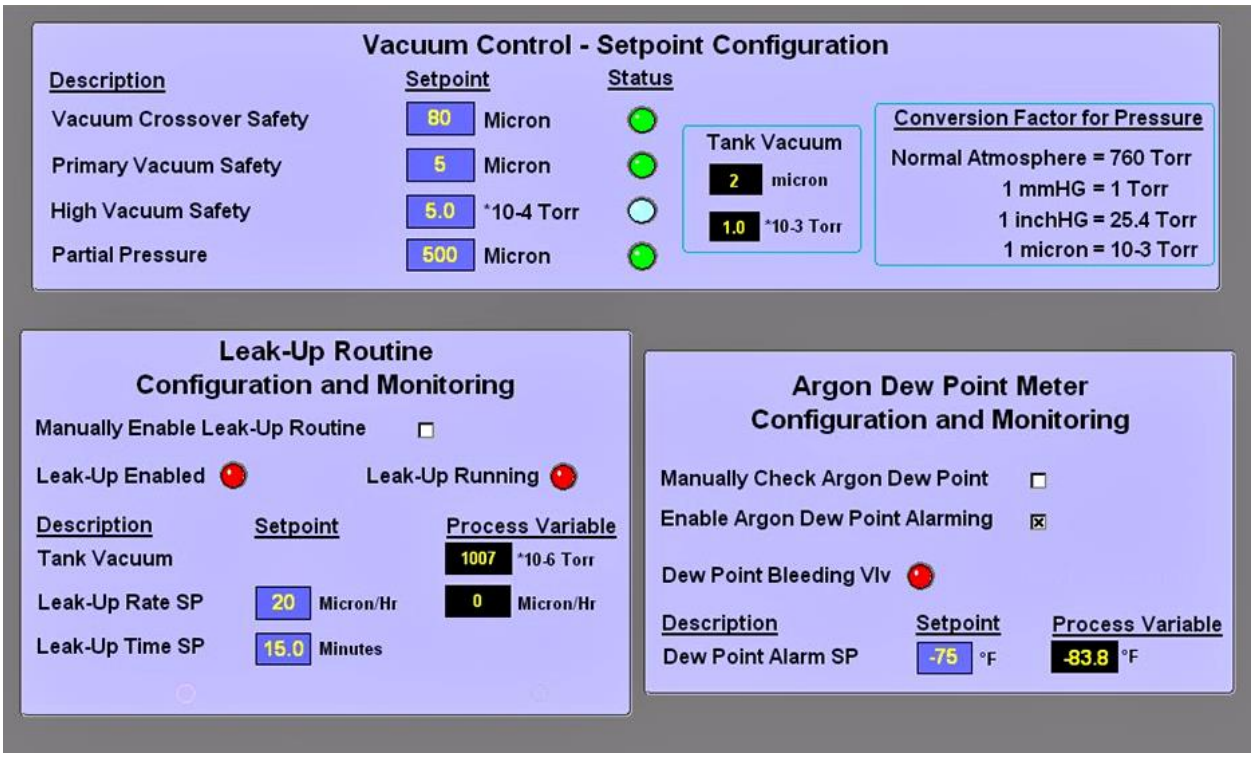
PLC Alarms



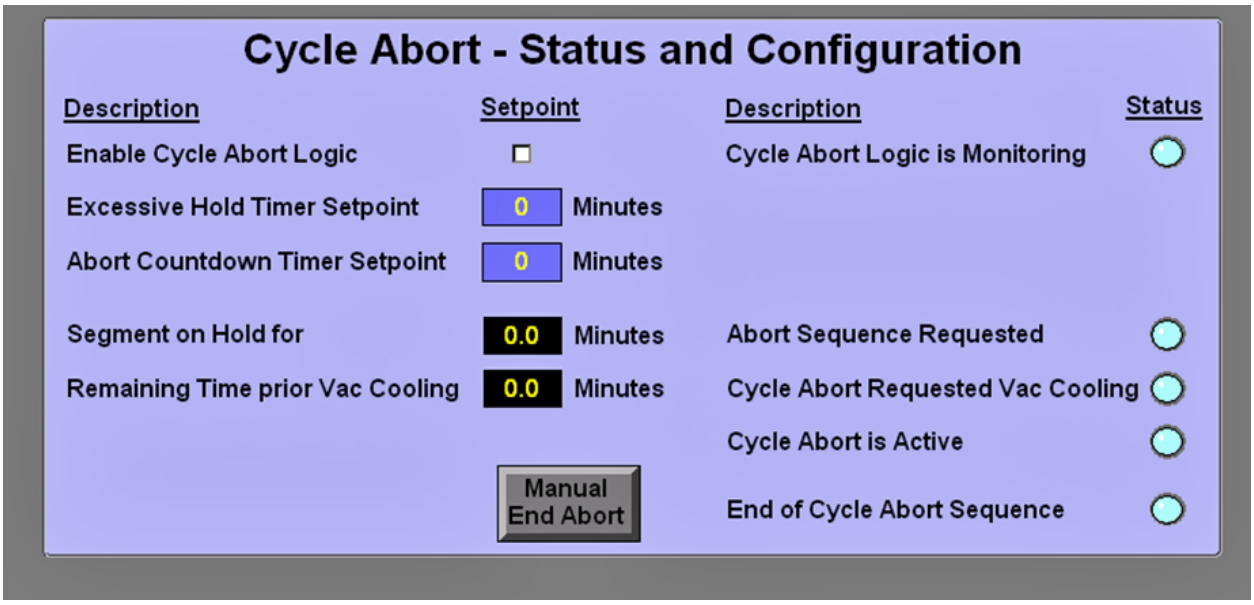
Alarms Screen



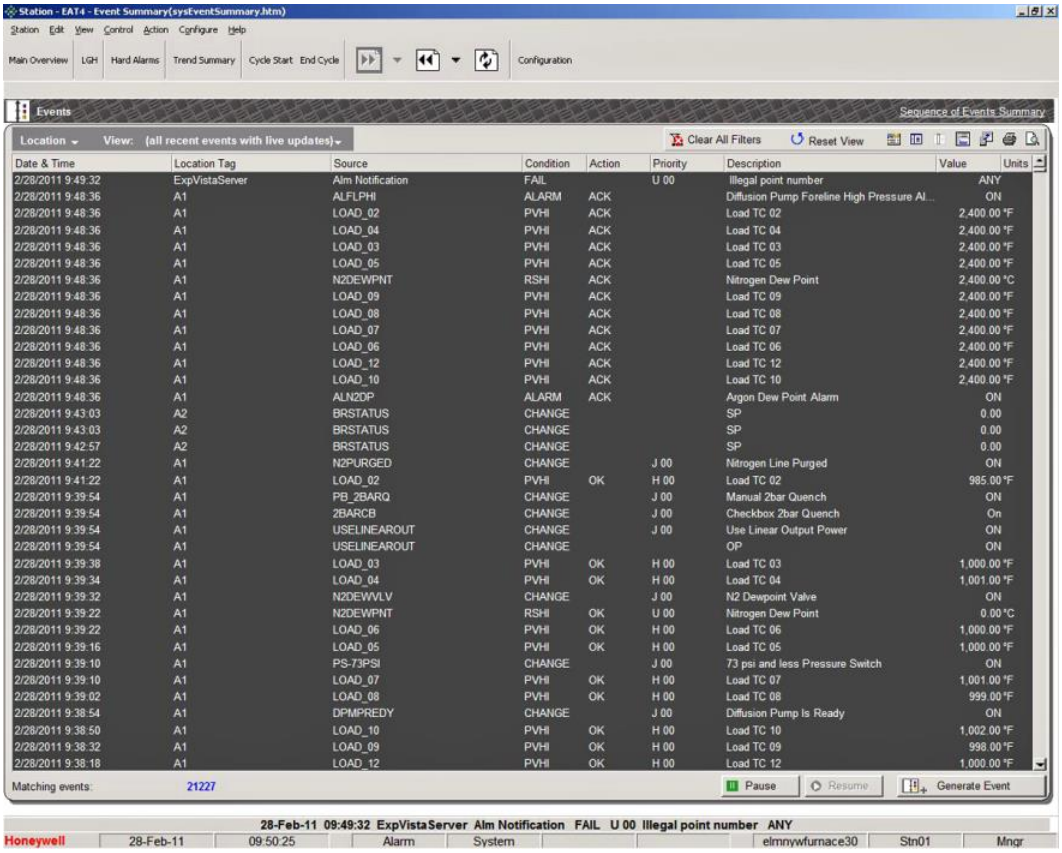
Advanced Furnace Configuration



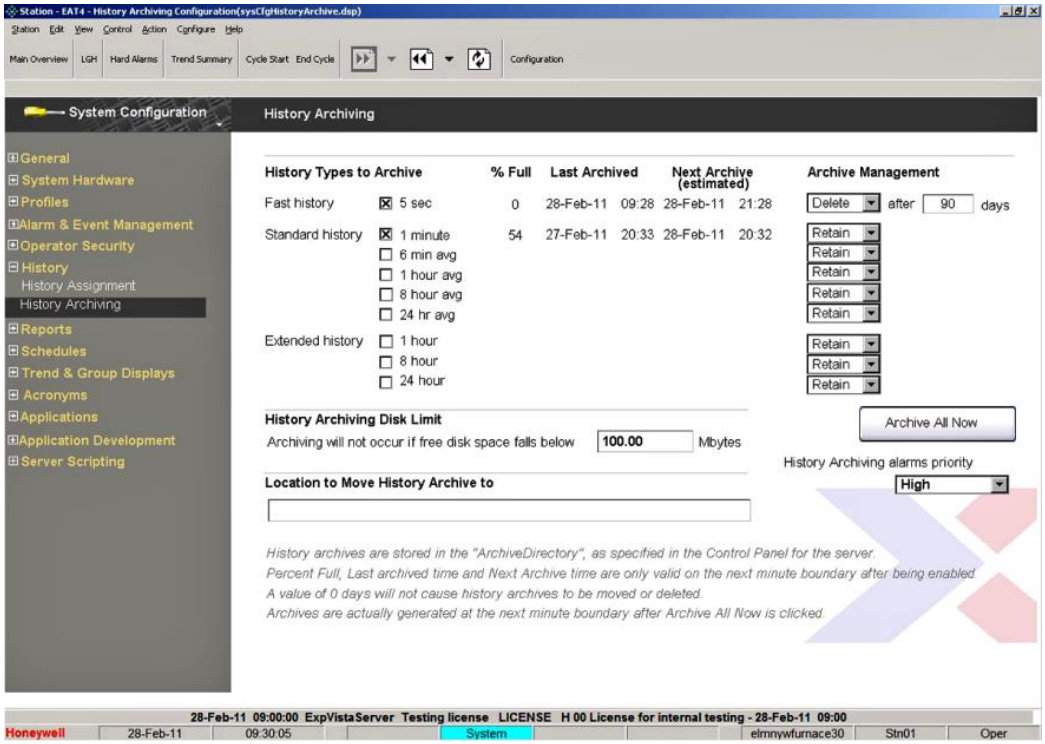
Vacuum Control - Set point Configuration



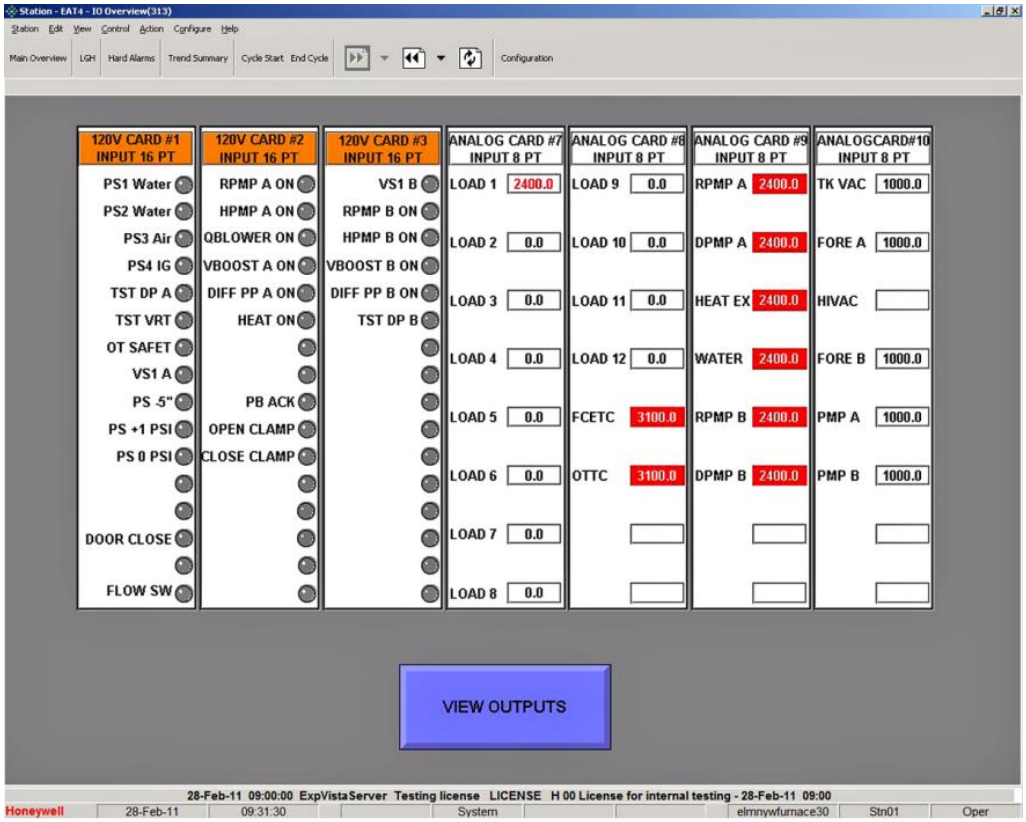
Cycle Abort - Status & Configuration



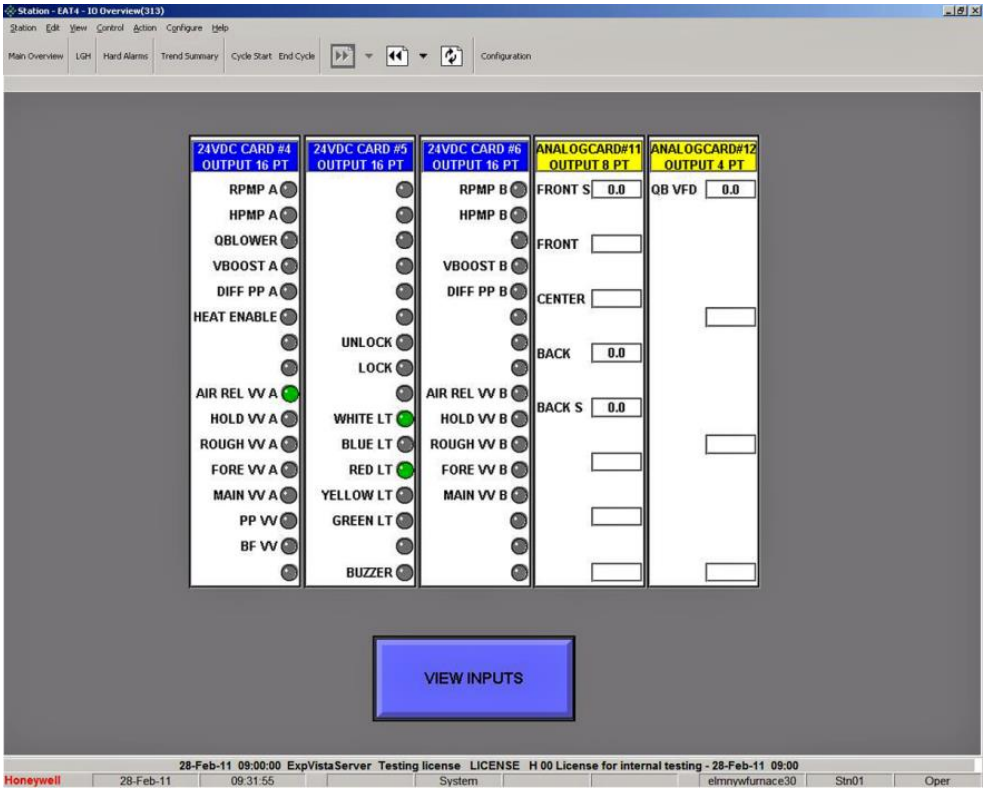
Events Log Screen



History Archiving



I/O Inputs


Station - EAT4 - IO Overview(313)
Station Edit View Control Action Configure Help
Main Overview LGH Hard Alarms Trend Summary Cycle Start End Cycle Configuration
24VDC CARD #4 OUTPUT 16 PT
RPMP A
HPMP A
QBLOWER
VBOOST A
DIFF PP A
HEAT ENABLE
AIR REL VV A
HOLD VV A
ROUGH VV A
FORE VV A
MAIN VV A
PP VV
BF VV
24VDC CARD #5 OUTPUT 16 PT
UNLOCK
LOCK
WHITE LT
BLUE LT
RED LT
YELLOW LT
GREEN LT
BUZZER
24VDC CARD #6 OUTPUT 16 PT
RPMP B
HPMP B
VBOOST B
DIFF PP B
AIR REL VV B
HOLD VV B
ROUGH VV B
FORE VV B
MAIN VV B
ANALOGCARD#11 OUTPUT 8 PT
FRONT S 0.0
FRONT
CENTER
BACK 0.0
BACK S 0.0
ANALOGCARD#12 OUTPUT 4 PT
QB VFD 0.0
VIEW INPUTS
28-Feb-11 09:00:00 ExpVistaServer Testing license LICENSE H 00 License for internal testing - 28-Feb-11 09:00
Honeywell 28-Feb-11 09:31:55 System elmnywfurnace30 Stn01 Oper

I/O Outputs