KnowledgeBase Article 2023

Spectrometer

What are the requirements for the Spectrometer to communicate with Guardian?

Today's Spectrometers have the ability to export data to a text file. Simple configuration creates a specific location on the server for the Spectrometer to save this file. Guardian will automatically read this file and import the data. The following data is required:

Master Heat Number
Heat Number (either assigned by Guardian at import or provided in file)
Recipe Number (must match the Recipe for the Part in the Work Order)
Work Order Number (if multiple WOs, separate with "#")
Burn Results

* If a Part Number is provided, it must match the Part on the Work Order
* If an Alloy is provided, it must match the Alloy for the Part on the Work Order

The process is quite simple:

1. Take the readings on the Spectrometer
2. You must have a valid Master Heat Number
3. Export the burn results to a file
4. Save the file to the specified folder on the server

   (\\GSSI-Server\Guardian\Data\Spectrometer)
5. Guardian will automatically search for Spectrometer files in the specified folder through a scheduled process (schedule is determined by you)
6. When the file is located, Guardian will import the data identifying the Work Order, Heat, Recipe and Burn Results
7. The Work Order is now cross-referenced with the Heat Number

As Spectrometers vary in file structure, the closer you can format the exported data to one of the examples below, the quicker Guardian can create the custom import routine for your specific Spectrometer. A sample of the export file and definition of the file layout is required. Multiple Work Order Numbers may be identified if the heat was used to pour multiple work orders. If Multiple Work Orders and/or Multiple Heat records are in the same file, all records must save successfully or they will be rolled back and the file will be moved to the "Errors" directory.

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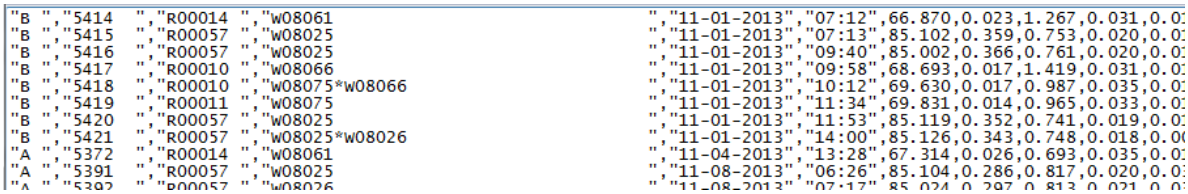
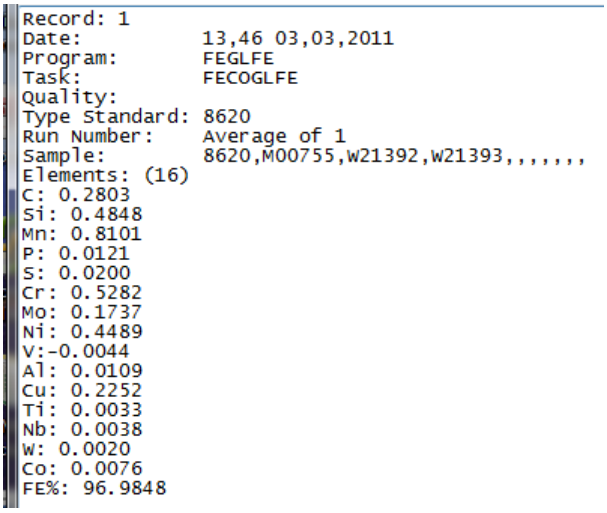
Below is an example of a comma separated format from a Guardian Client's Spectrometer. In this format, Guardian requires definition of each value separated by a comma, in order to import this data.



```
"B ","5414  ","R00014 ","W08061                                    ","11-01-2013","07:12",66.870,0.023,1.267,0.031,0.0
"B ","5415  ","R00057 ","W08025                                    ","11-01-2013","07:13",85.102,0.359,0.753,0.020,0.0
"B ","5416  ","R00057 ","W08025                                    ","11-01-2013","09:40",85.002,0.366,0.761,0.020,0.0
"B ","5417  ","R00010 ","W08066                                    ","11-01-2013","09:58",68.693,0.017,1.419,0.031,0.0
"B ","5418  ","R00010 ","W08075*W08066                             ","11-01-2013","10:12",69.630,0.017,0.987,0.035,0.0
"B ","5419  ","R00011 ","W08075                                    ","11-01-2013","11:34",69.831,0.014,0.965,0.033,0.0
"B ","5420  ","R00057 ","W08025                                    ","11-01-2013","11:53",85.119,0.352,0.741,0.019,0.0
"B ","5421  ","R00057 ","W08025*W08026                             ","11-01-2013","14:00",85.126,0.343,0.748,0.018,0.0
"A ","5372  ","R00014 ","W08061                                    ","11-04-2013","13:28",67.314,0.026,0.693,0.035,0.0
"A ","5391  ","R00057 ","W08025                                    ","11-08-2013","06:26",85.104,0.286,0.817,0.020,0.0
"A ","5392  ","R00057 ","W08026                                    ","11-08-2013","07:17",85.024,0.297,0.813,0.021,0.0
```

In this second example below, from another Guardian Client's Spectrometer, each element is listed and identified with the burn results.



```
Record: 1
Date:          13,46 03,03,2011
Program:       FEGLFE
Task:          FECOGLFE
Quality:
Type Standard: 8620
Run Number:    Average of 1
Sample:        8620,M00755,W21392,W21393,,,,,,
Elements: (16)
C: 0.2803
Si: 0.4848
Mn: 0.8101
P: 0.0121
S: 0.0200
Cr: 0.5282
Mo: 0.1737
Ni: 0.4489
V:-0.0044
Al: 0.0109
Cu: 0.2252
Ti: 0.0033
Nb: 0.0038
W: 0.0020
Co: 0.0076
FE%: 96.9848
```

Again, the closer your export file is to a known export file used by another of Guardian's clients, the more efficiently Guardian can create the custom import routine for your Spectrometer file.

To summarize the data requirements in the export file:

Master Heat Number
Heat Number (either assigned by Guardian at import or provided in file)
Recipe Number (must match the Recipe for the Part in the Work Order)
Work Order Number (if multiple WOs, separate with "#")
Burn Results

* If a Part Number is provided, it must match the Part on the Work Order
* If an Alloy is provided, it must match the Alloy for the Part on the Work Order

The export file should be saved to: \\GSSI-Server\Guardian\Data\Spectrometer

As always, contact Guardian Support should you have any questions.

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