Collaborative Testing Services, Inc.

Fasteners & Metals Interlaboratory Testing Program

Summary Report Cycle 123, 3rd Qtr 2018

About the Metals Program About CTS Key to Tables and Graphs

Analysis	Test Group
	Dimensional Tests
101	Dimensional: Outside Diameter of Plain Plug Gage
	Tensile Tests
105	Tensile Strength: Lab-Machined Flat Aluminum
106	Yield Strength: Lab-Machined Flat Aluminum
107	Elongation: Lab-Machined Flat Aluminum
110	Tensile Strength: Pre-Machined Round Steel
111	Yield Strength: Pre-Machined Round Steel
112	Elongation: Pre-Machined Round Steel
113	Reduction of Area: Pre-Machined Round Steel
140	Tensile Strength: Lab-Machined Round Steel
141	Yield Strength: Lab-Machined Round Steel
142	Elongation: Lab-Machined Round Steel
143	Reduction of Area: Lab-Machined Round Steel
	Hardness / Metallography Tests
118	Rockwell Hardness: C & B Scales
119	Rockwell Hardness: B Scale
121	Microhardness: Knoop Indenters (500 gf)
122	Microhardness: Knoop Indenters (200 gf)
123	Microhardness: Vickers Indenters (500 gf)
135	Brinell Hardness
	Chemical Analyses
170 - 179	Chemical Analysis: Carbon & Low Alloy Steel

ABOUT THE FASTENERS & METALS PROGRAM

Collaborative Testing Services operates and maintains the program for Fasteners and Metals as part of a series of Proficiency and Interlaboratory Testing Programs offered by CTS in cooperation with various associations for a wide range of industries. Personnel from the National Institute of Standards and Technology (formerly the National Bureau of Standards), Industrial Fasteners Institute (IFI), and the Naval Shipyard Laboratories provide technical guidance and advice to this program.

The purpose of the program is to give participating laboratories a means to compare periodically the level and uniformity of their testing with that of other laboratories in the industry. It also provides a realistic assessment of the state of fasteners and metals testing proficiency.

In each report, there is a summary of the statistics for the analysis and a graphical representation of the data for each test. Also shown are notes concerning specific laboratory results, as well as significant findings related to instrument types or other testing variations. Refer to the KEY TO TABLES AND GRAPHS for an explanation of terms and guidelines to interpreting the results.

ABOUT CTS

Founded in 1971, CTS is a privately-owned company that specializes in interlaboratory tests for a wide variety of industries, including rubber, plastics, fasteners and metals, containerboard, paper, color, and wine as well as proficiency tests for forensic laboratories. All of the tests are designed to assist organizations in achieving and maintaining quality control objectives. Labs from the U.S., as well as more than 50 countries, currently participate in the CTS programs.
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Key for Fasteners & Metals Program Web Summary Report

WebCode - Assigned laboratory identification number(temporary)used to ensure lab confidentiality while permitting a lab to locate its data in the report published on the CTS website.

Lab Mean - The average of the test results obtained by the participant.

Grand Mean - The average of the LAB MEANS for all included participants. Laboratories flagged with an X or an M (see DATA FLAG column) are excluded from the GRAND MEAN.

Between-Lab Standard Deviation - An indication of the precision of measurement between the laboratories. The greater the spread of the LAB MEANS about the GRAND MEAN, the larger the BETWEEN-LAB STANDARD DEVIATION (and vice versa).

Comparative Performance Value (CPV) - An indication of how well a laboratory's results agree with the other participants. The CPV is a ratio indicating the number of standard deviations from the GRAND MEAN. CPV = (LAB MEAN - GRAND MEAN)/ BETWEEN-LAB STANDARD DEVIATION. The closer a laboratory's COMPARATIVE PERFORMANCE VALUE is to zero, the more consistent its results are with the other participants' data (and vice versa).

Instr. Code - A code indicating the manufacturer of the instrument used to perform the test (see separate INSTRUMENT CODE LIST for each test section).

Data Flag - DATA FLAGS are assigned based on the simultaneous analysis of both samples tested. Refer to the following chart for an explanation of each symbol:

Data Flags

Data Flag Type	Statistically Included/Excluded	ACTION REQUIRED
*	INCLUDED	CAUTION - review testing procedure and monitor future results. Results fall outside the drawn 95% ellipse but within a 99% ellipse that is calculated but not drawn. Labs flagged with an * do not typically receive a specific note regarding the flag. If this error is repeated in future rounds, however, a lab may need to stop and review its testing procedures. The initial data flag is not cause for alarm.
X	EXCLUDED	STOP - immediate review of data and/or testing procedure is required (all tests exept Chemical Analyses). Results fall outside the 99% ellipse. See the specific note following the data for more information on why the data are excluded. For Chemical Analyses see an additional Memo.
M	EXCLUDED	PROCEED - lab was unable to report data for at least one sample. However, a lab receiving two or more M flags for a test may need to stop and review its testing procedures.

Graph - For each laboratory, the Lab Mean for the second sample (y-axis) is plotted against the Lab Mean for the first sample (x-axis) with each point representing a laboratory. The horizontal and vertical cross-hairs are the Grand Means for each sample. When 20 or more laboratories are included in the statistics, an ellipse is also drawn so that 95% of the time a randomly selected laboratory will be included inside the ellipse. Plotted data flags are explained above. Labs not receiving a data flag appear as points on the plot.

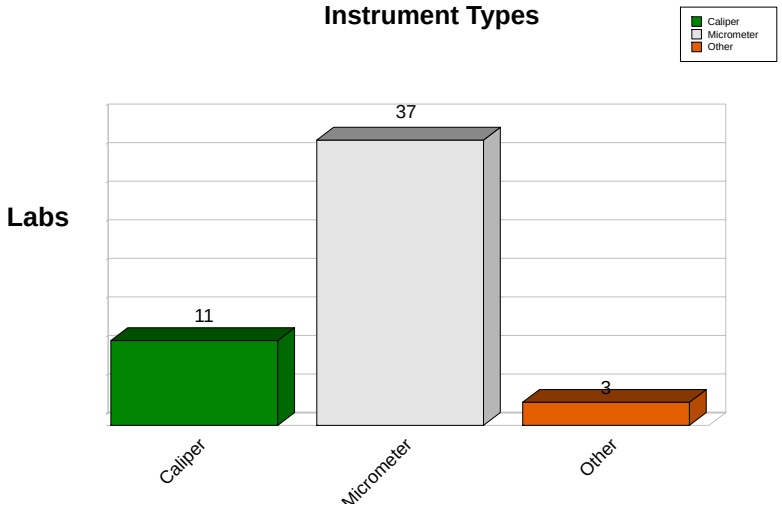
Fasteners and Metals Interlaboratory Testing Program

Analysis 101

Dimensional: Outside Diameter of Plain Plug Gage
ISO GUM

Cycle 123
3rd Qtr 2018

During Cycle 123, CTS conducted the Analysis #101 - Round Dimensional. For this test all participants received two samples I53 and I54 with nominal diameters; 0.3750 in. and 0.3746 in. Each sample is an English Class X gage pin with 0.00002 in roundness limit made from 52100 bearing steel, hardened to 60-62 Rockwell C. Laboratories were asked to determine the outside diameter of the pins. 51 laboratories that subscribed for this test reported testing results. The graph below shows a breakdown of the types of instruments used.



Analysis of the Results

The most convenient and common method of judging the quality of measurement results is by calculating the performance statistic, En, calculated as:

$$E_n = \frac{\left(X_{lab} - X_{ref}\right)}{\sqrt{U_{lab}^2 + U_{ref}^2}}$$

Where the assigned value, Xref, is determined in a reference laboratory, Uref is the expanded uncertainty of Xref, and Ulab is the **Expanded Uncertainty** of a participant's result, Xlab. En is not calculated for Labs who did not report their Expanded Uncertainty.

Absolute values of En less than **1.00** should be obtained for the measurements to be acceptable.

The following graph and the table represent the results reported by participants. All tests were conducted at room temperature (20-23C or 68-77F).

Xref and Uref were determined by the gage pin manufacturer. The manufacturer is ISO 9001:2000 Certified and an ISO 17025 Accredited company. All master gages used in checking the plug gages are calibrated with standards traceable to NIST.

$$E_n = \frac{\left(X_{lab} - X_{ref}\right)}{\sqrt{U_{lab}^2 + U_{ref}^2}}$$

Xref1 = 0.3750 in.

Xref2 = 0.3746 in.

WebCode	Data Flag (if assigned)	Reference Uncertainty (Uref)	Expanded Uncertainty (Ulab)	Sample I53 Lab Mean (Xlab)	Sample I53 Performance Statistic (En1)	Sample I54 Lab Mean (Xlab)	Sample I54 Performance Statistic (En2)	Instrument
22PQM9		0.00004	0.07874	0.37492	0.00	0.37453	0.00	Micrometer
4443GV		0.00004	0.00016	0.37502	0.12	0.37460	0.00	Micrometer
47FH9B		0.00004	0.00005	0.37500	0.00	0.37460	0.00	Micrometer
4KG89G		0.00004	0.00015	0.37500	0.00	0.37450	-0.64	Micrometer
4QGQ9R	X	0.00004	0.00016	0.37482	-1.11	0.37429	-1.90	Micrometer
6W2FZE		0.00004	0.00040	0.37496	-0.10	0.37457	-0.07	Micrometer
73NTPL		0.00004	0.00030	0.37490	-0.33	0.37450	-0.33	Micrometer
84URDD		0.00004	0.00039	0.37497	-0.08	0.37455	-0.12	Micrometer
8A6BFM		0.00004	0.00040	0.37497	-0.07	0.37457	-0.07	Micrometer
8WVKUE		0.00004	Not Reported	0.37500		0.37450		Micrometer
9QM7MT		0.00004	0.02756	0.37490	0.00	0.37451	0.00	Micrometer
9ZUAW8		0.00004	0.00062	0.37480	-0.32	0.37460	0.00	Caliper
AF3K26		0.00004	0.00118	0.37472	-0.23	0.37441	-0.16	Caliper
B7QVUK		0.00004	0.00200	0.37498	-0.01	0.37456	-0.02	Micrometer
BEM8UD		0.00004	0.00118	0.37449	-0.43	0.37409	-0.43	Caliper
C2TVTU		0.00004	0.00094	0.37472	-0.30	0.37428	-0.34	Micrometer
C6GMAW		0.00004	0.00047	0.37499	-0.02	0.37456	-0.09	Micrometer
D76JAA	X	0.00004	0.00007	0.37488	-1.42	0.37452	-0.95	Micrometer
DF9V64		0.00004	0.00210	0.37500	0.00	0.37400	-0.29	Caliper
G783G3		0.00004	0.00100	0.37450	-0.50	0.37400	-0.60	Caliper
GCHG6Y		0.00004	0.00035	0.37487	-0.36	0.37447	-0.37	Other
HYKU8W		0.00004	0.00042	0.37496	-0.09	0.37461	0.02	Micrometer
MMW9ZW		0.00004	0.00015	0.37495	-0.30	0.37454	-0.41	Micrometer
MVBRB9		0.00004	Not Reported	0.37496		0.37450		Micrometer
N8ZJDX		0.00004	0.00030	0.37490	-0.33	0.37450	-0.33	Micrometer
P6AWN8	X	0.00004	0.00092	0.37400	-1.09	0.37400	-0.65	Caliper
P7HPA3		0.00004	0.00047	0.37500	0.00	0.37458	-0.04	Micrometer
PJVCMZ		0.00004	0.00011	0.37500	0.00	0.37460	0.00	Micrometer
Q8CYJB		0.00004	0.00019	0.37495	-0.28	0.37453	-0.37	Micrometer
Q9LD34		0.00004	0.00042	0.37500	0.00	0.37450	-0.24	Caliper
QBVP8U		0.00004	0.00010	0.37504	0.37	0.37466	0.56	Micrometer
QKGFVX		0.00004	0.00027	0.37495	-0.18	0.37456	-0.15	Micrometer
QLQZF2	X	0.00004	0.00002	0.37456	-10.25	0.37444	-3.70	Micrometer

$$E_n = \frac{\left(X_{lab} - X_{ref}\right)}{\sqrt{U_{lab}^2 + U_{ref}^2}}$$

Xref1 = 0.3750 in.

Xref2 = 0.3746 in.

WebCode	Data Flag (if assigned)	Reference Uncertainty (Uref)	Expanded Uncertainty (Ulab)	Sample I53 Lab Mean (Xlab)	Sample I53 Performance Statistic (En1)	Sample I54 Lab Mean (Xlab)	Sample I54 Performance Statistic (En2)	Instrument
RETQN3		0.00004	0.00001	0.37496	-0.96	0.37457	-0.81	Micrometer
TFC79V		0.00004	0.00015	0.37490	-0.64	0.37450	-0.64	Micrometer
TW84N3		0.00004	0.00013	0.37496	-0.28	0.37457	-0.23	Micrometer
UATHKB		0.00004	0.00015	0.37498	-0.13	0.37457	-0.19	Micrometer
UB29MU		0.00004	0.00030	0.37500	0.00	0.37462	0.07	Other
UC9VRL		0.00004	0.00023	0.37489	-0.47	0.37452	-0.34	Micrometer
UJQ2QD		0.00004	0.00059	0.37488	-0.20	0.37446	-0.24	Micrometer
UNPB7L		0.00004	0.00020	0.37500	0.00	0.37458	-0.10	Micrometer
UTW97D		0.00004	0.00030	0.37510	0.33	0.37460	0.00	Micrometer
V7YYNC		0.00004	0.00150	0.37500	0.00	0.37450	-0.07	Caliper
VCMG2M		0.00004	0.00012	0.37498	-0.16	0.37448	-0.94	Micrometer
XDBMJP		0.00004	0.00050	0.37495	-0.10	0.37455	-0.10	Micrometer
YMHDFQ	X	0.00004	0.00058	0.37500	0.00	0.37400	-1.03	Caliper
YUH43W		0.00004	0.00020	0.37500	0.00	0.37457	-0.16	Micrometer
Z6BUFN		0.00004	0.00040	0.37498	-0.05	0.37453	-0.17	Micrometer
Z7746P		0.00004	0.00043	0.37512	0.27	0.37476	0.36	Other
Z8WXMK		0.00004	0.00116	0.37490	-0.09	0.37440	-0.17	Caliper
ZXH42X		0.00004	Not Reported	0.37450		0.37400		Caliper

Summary Statistics

		Sample I53		Sample I54	
Reference Uncertainty = 0.00004 in.	Reference Diameters:	0.3750	inch	0.3746	inch

Samples I53, I54 : 52100 Steel, 52100 Steel

Comments on Assigned Data Flags for Test #101

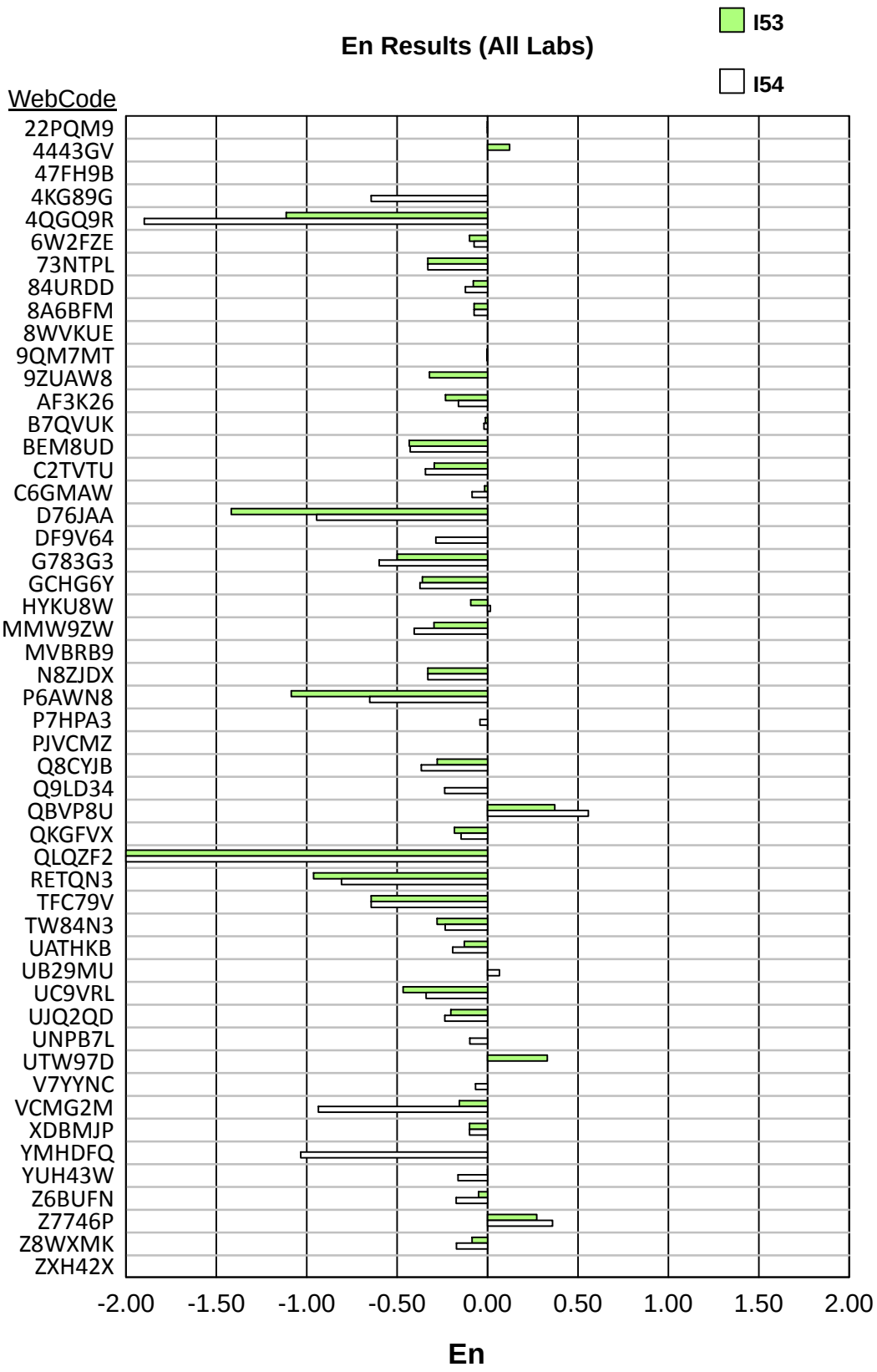
4QGQ9R (X) - En value for both samples was low.

D76JAA (X) - En value for sample I53 was low.

P6AWN8 (X) - En value for sample I53 was low.

QLQZF2 (X) - En value for both samples was low.

YMHDFQ (X) - En value for sample I54 was low.



		Sample R53			Sample R54		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
2NZULB		45.40	-0.30	-0.71	48.50	-0.40	-0.90
2QN7KF		46.00	0.30	0.69	49.50	0.60	1.37
3XYF3Y	*	46.70	1.00	2.34	49.17	0.27	0.62
4FJGJM		45.60	-0.10	-0.24	48.80	-0.10	-0.22
4GCN4U		46.40	0.70	1.63	49.50	0.60	1.37
67RBFN		45.68	-0.02	-0.05	48.79	-0.11	-0.25
6APHKR		46.00	0.30	0.69	49.10	0.20	0.46
7G77ZF	X	42.07	-3.64	-8.51	49.17	0.27	0.61
9U7RFA		45.66	-0.04	-0.11	48.83	-0.06	-0.14
BJY82C	*	45.72	0.02	0.04	49.63	0.73	1.67
CEJKVK		45.90	0.20	0.46	49.00	0.10	0.23
D76JAA	X	46.10	0.40	0.93	47.80	-1.10	-2.50
EV3LRF		45.70	0.00	-0.01	48.90	0.00	0.01
GAEVGM		45.00	-0.70	-1.65	48.70	-0.20	-0.45
GFH2WP		45.70	0.00	-0.01	48.80	-0.10	-0.22
GNA9P4	X	47.09	1.39	3.25	49.32	0.42	0.96
GUYPCE		45.70	0.00	-0.01	49.00	0.10	0.23
J4WGND		45.85	0.14	0.34	48.99	0.09	0.21
JHDJRA		44.80	-0.90	-2.11	48.20	-0.70	-1.59
K734WB		45.30	-0.40	-0.94	48.60	-0.30	-0.68
KG2CH9		45.69	-0.02	-0.04	49.31	0.42	0.95
KWBGMZ		45.60	-0.10	-0.24	48.80	-0.10	-0.22
LKVFLQ		46.01	0.30	0.71	49.02	0.13	0.29
MENHU9	*	44.91	-0.79	-1.86	47.65	-1.25	-2.84
QF6GBR		45.20	-0.50	-1.18	48.30	-0.60	-1.36
QLDUA6	*	46.20	0.50	1.16	50.00	1.10	2.51
QLQZF2		45.54	-0.16	-0.38	48.73	-0.16	-0.37
QRH6EX		45.40	-0.30	-0.71	48.60	-0.30	-0.68
RZPVBY	X	49.30	3.60	8.42	51.00	2.10	4.78
TAVXA4		45.50	-0.20	-0.48	48.90	0.00	0.01
U9BQ8J		46.31	0.61	1.42	49.33	0.43	0.98
UB29MU		46.60	0.90	2.10	49.30	0.40	0.92
UTKNQF		45.22	-0.49	-1.14	48.38	-0.51	-1.17
UW3V73	X	43.50	-2.20	-5.16	48.40	-0.50	-1.13
V9RAPW	X	47.60	1.90	4.44	50.70	1.80	4.10
VDF3JX		45.90	0.20	0.46	49.30	0.40	0.92
WDGHPQ		45.40	-0.30	-0.71	48.70	-0.20	-0.45
WQ3H8H		45.85	0.14	0.34	49.05	0.16	0.35
WTP8DG		45.70	0.00	-0.01	48.80	-0.10	-0.22
Y83BZM		46.00	0.30	0.69	49.00	0.10	0.23
YW66BV		45.70	0.00	-0.01	48.60	-0.30	-0.68
Z7NLAQ		45.48	-0.22	-0.51	48.50	-0.40	-0.90

Summary Statistics

	Sample R53		Sample R54	
Grand Means	45.70	ksi	48.90	ksi
Stnd Dev Btwn Labs	0.43	ksi	0.44	ksi

Samples R53, R54 : 16G 6061-T6 (A), 14G 6061-T6 (B)

Statistics based on 36 of 42 reporting participants

Comments on Assigned Data Flags for Test #105

7G77ZF (X) - Data for sample R53 are low.

D76JAA (X) - Inconsistent in testing between samples.

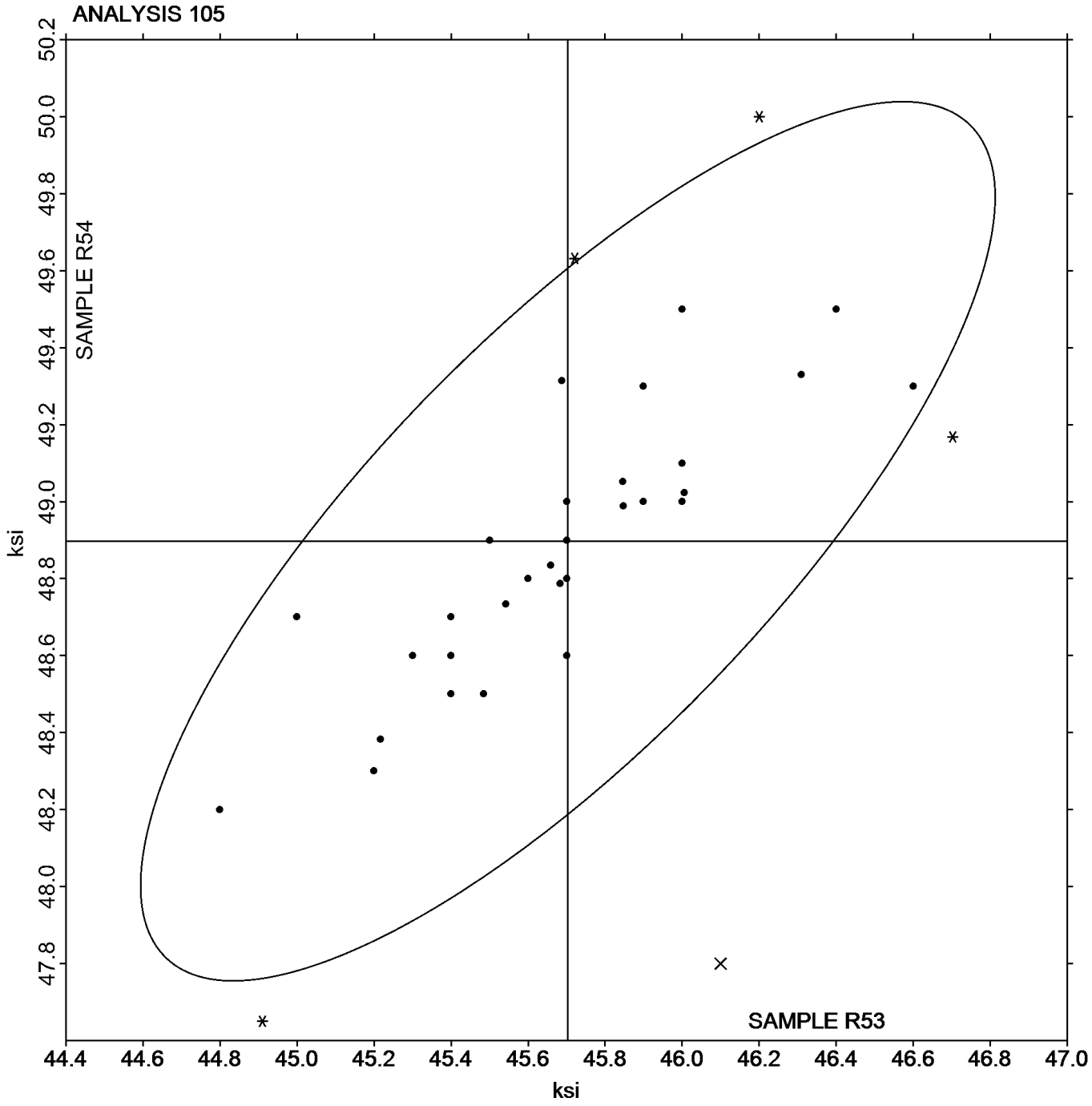
GNA9P4 (X) - Data for sample R53 are high.

RZPVBY (X) - Data for both samples are high. Possible Systematic Error.

UW3V73 (X) - Data for sample R53 are low.

V9RAPW (X) - Data for both samples are high. Possible Systematic Error.

SAMPLE R53	SAMPLE R54
45.70 ksi	48.90 ksi



		Sample R53			Sample R54		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
2NZULB		39.70	-0.74	-1.37	38.70	-0.30	-0.67
2QN7KF		40.60	0.16	0.30	39.70	0.70	1.56
3XYF3Y		40.61	0.17	0.32	39.16	0.16	0.36
4FJGJM		40.40	-0.04	-0.07	38.80	-0.20	-0.45
4GCN4U		41.30	0.86	1.60	39.80	0.80	1.79
67RBFN		40.59	0.15	0.28	38.87	-0.13	-0.29
6APHKR		40.90	0.46	0.86	39.30	0.30	0.67
7G77ZF	X	36.97	-3.46	-6.43	39.67	0.67	1.50
9U7RFA		40.44	0.00	0.00	39.32	0.32	0.71
BJY82C		40.54	0.10	0.19	39.70	0.70	1.56
CEJKVK		40.30	-0.14	-0.25	39.00	0.00	0.00
D76JAA	*	40.90	0.46	0.86	38.40	-0.60	-1.34
EV3LRF		40.40	-0.04	-0.07	38.90	-0.10	-0.23
GAEVGM		40.00	-0.44	-0.81	38.60	-0.40	-0.90
GFH2WP		40.90	0.46	0.86	39.00	0.00	0.00
GNA9P4		41.71	1.27	2.36	39.58	0.58	1.30
GUYPCE		40.60	0.16	0.30	39.10	0.10	0.22
J4WGND		40.54	0.10	0.18	39.18	0.18	0.39
JHDJRA		39.70	-0.74	-1.37	38.80	-0.20	-0.45
K734WB		39.80	-0.64	-1.18	38.60	-0.40	-0.90
KG2CH9		40.61	0.17	0.32	39.60	0.59	1.33
KWBGMZ		40.60	0.16	0.30	39.40	0.40	0.89
LKVFLQ		40.63	0.20	0.37	39.01	0.01	0.02
MENHU9		39.05	-1.39	-2.58	38.11	-0.90	-2.00
QF6GBR		40.10	-0.34	-0.63	38.60	-0.40	-0.90
QLDUA6	X	40.90	0.46	0.86	40.50	1.50	3.35
QLQZF2		40.18	-0.26	-0.49	38.87	-0.13	-0.29
QRH6EX		40.40	-0.04	-0.07	39.00	0.00	0.00
RZPVBY	X	44.00	3.56	6.61	41.20	2.20	4.92
TAVXA4		39.40	-1.04	-1.92	37.90	-1.10	-2.46
U9BQ8J		41.10	0.66	1.23	39.50	0.50	1.12
UB29MU		41.40	0.96	1.79	39.60	0.60	1.34
UTKNQF		39.53	-0.90	-1.68	38.42	-0.59	-1.31
UW3V73	X	38.40	-2.04	-3.78	38.50	-0.50	-1.12
V9RAPW	X	42.70	2.26	4.20	40.80	1.80	4.02
VDF3JX		40.40	-0.04	-0.07	39.10	0.10	0.22
WDGHPQ		40.60	0.16	0.30	39.30	0.30	0.67
WQ3H8H		40.55	0.12	0.21	39.03	0.03	0.07
WTP8DG		40.40	-0.04	-0.07	38.70	-0.30	-0.67
Y83BZM		40.70	0.26	0.49	39.00	0.00	0.00
YW66BV		40.30	-0.14	-0.25	38.50	-0.50	-1.12
Z7NLAQ		40.31	-0.13	-0.24	38.90	-0.10	-0.23

Summary Statistics

	Sample R53		Sample R54	
Grand Means	40.44	ksi	39.00	ksi
Stnd Dev Btwn Labs	0.54	ksi	0.45	ksi

Samples R53, R54 : 16G 6061-T6 (A), 14G 6061-T6 (B)

Statistics based on 37 of 42 reporting participants

Comments on Assigned Data Flags for Test #106

7G77ZF (X) - Data for sample R53 are low.

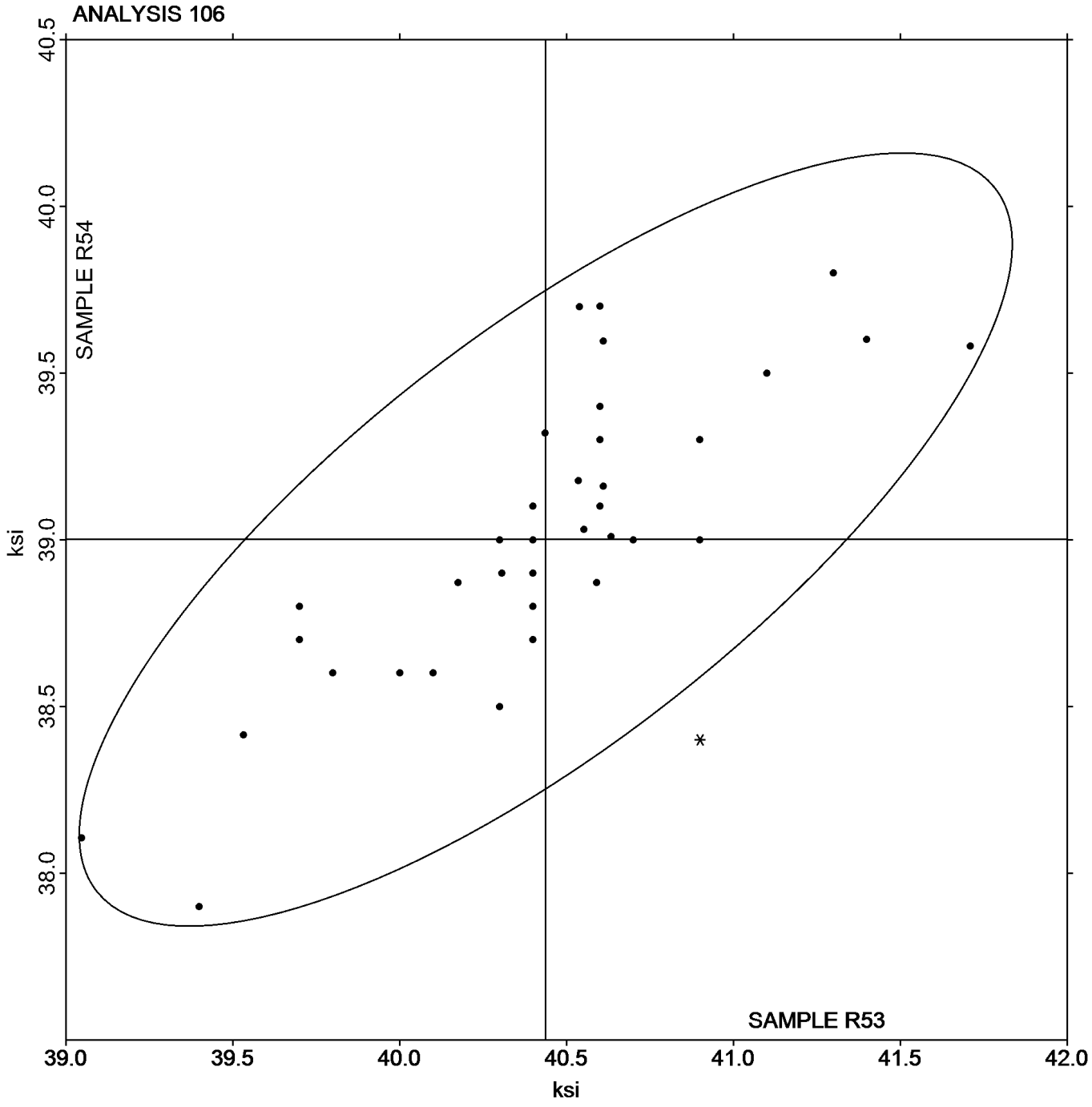
QLDUA6 (X) - Data for sample R54 are high.

RZPVBY (X) - Data for both samples are high.

UW3V73 (X) - Data for sample R53 are low.

V9RAPW (X) - Data for both samples are high.

SAMPLE R53	SAMPLE R54
40.44 ksi	39.00 ksi



		Sample R53			Sample R54		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
2NZULB		10.50	-0.62	-0.69	17.50	-0.52	-0.55
2QN7KF		10.70	-0.42	-0.47	17.50	-0.52	-0.55
3XYF3Y		12.20	1.08	1.22	17.70	-0.32	-0.34
4FJGJM		11.80	0.68	0.77	18.70	0.68	0.72
4GCN4U		10.50	-0.62	-0.69	18.00	-0.02	-0.02
67RBFN		11.74	0.62	0.70	18.90	0.88	0.93
6APHKR		12.00	0.88	1.00	19.00	0.98	1.04
7G77ZF	*	11.20	0.08	0.10	19.90	1.88	1.99
9U7RFA		12.50	1.38	1.56	19.00	0.98	1.04
BJY82C		10.51	-0.60	-0.68	16.99	-1.03	-1.09
CEJKVK		9.700	-1.42	-1.59	15.80	-2.22	-2.34
D76JAA		9.900	-1.22	-1.37	16.40	-1.62	-1.71
EV3LRF		10.50	-0.62	-0.69	18.50	0.48	0.51
GAEVGM	X	14.20	3.08	3.47	21.70	3.68	3.89
GFH2WP		12.20	1.08	1.22	18.00	-0.02	-0.02
GNA9P4	*	10.61	-0.51	-0.57	19.28	1.26	1.33
GUYPCE		10.70	-0.42	-0.47	18.10	0.08	0.09
J4WGND		10.80	-0.32	-0.35	17.32	-0.70	-0.74
JHDJRA		11.00	-0.12	-0.13	17.20	-0.82	-0.86
K734WB		12.50	1.38	1.56	19.00	0.98	1.04
KG2CH9		9.700	-1.42	-1.59	16.50	-1.52	-1.60
KWBGMZ		12.10	0.98	1.11	18.90	0.88	0.93
LKVFLQ		12.28	1.16	1.31	19.28	1.26	1.33
MENHU9		12.00	0.88	1.00	19.00	0.98	1.04
QF6GBR		12.00	0.88	1.00	19.00	0.98	1.04
QLDUA6		9.800	-1.32	-1.48	16.40	-1.62	-1.71
QLQZF2		10.60	-0.52	-0.58	18.30	0.28	0.30
QRH6EX		11.00	-0.12	-0.13	18.00	-0.02	-0.02
RZPVBY		12.10	0.98	1.11	18.20	0.18	0.19
TAVXA4		11.90	0.78	0.88	18.40	0.38	0.40
U9BQ8J		11.10	-0.02	-0.02	18.10	0.08	0.09
UB29MU		11.00	-0.12	-0.13	18.50	0.48	0.51
UTKNQF		12.55	1.43	1.62	18.25	0.23	0.25
UW3V73		11.10	-0.02	-0.02	18.70	0.68	0.72
V9RAPW		11.00	-0.12	-0.13	17.90	-0.12	-0.12
VDF3JX		10.90	-0.22	-0.24	17.10	-0.92	-0.97
WDGHPQ		10.50	-0.62	-0.69	17.50	-0.52	-0.55
WQ3H8H		9.400	-1.72	-1.93	16.30	-1.72	-1.82
WTP8DG		11.50	0.38	0.43	18.50	0.48	0.51
Y83BZM		10.40	-0.72	-0.81	17.50	-0.52	-0.55
YW66BV		11.60	0.48	0.55	18.50	0.48	0.51
Z7NLAQ		9.630	-1.49	-1.67	17.10	-0.92	-0.97

Summary Statistics

	Sample R53		Sample R54	
Grand Means	11.12	Percent	18.02	Percent
Stnd Dev Btwn Labs	0.89	Percent	0.95	Percent

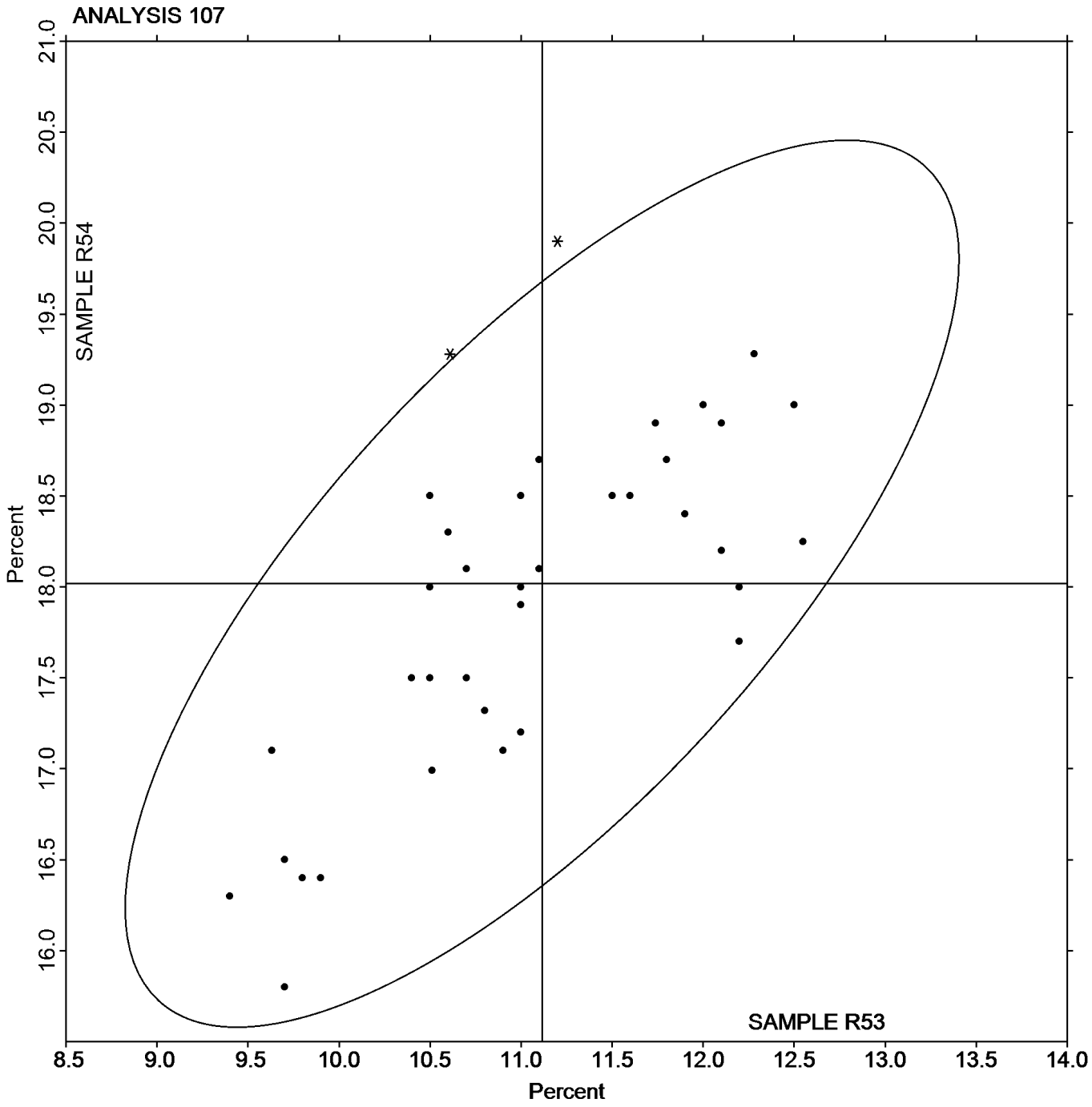
Samples R53, R54 : 16G 6061-T6 (A), 14G 6061-T6 (B)

Statistics based on 41 of 42 reporting participants

Comments on Assigned Data Flags for Test #107

GAEVGM (X) - Data for both samples are high. Possible Systematic Error.

SAMPLE R53	SAMPLE R54
11.12 Percent	18.02 Percent



		Sample A53			Sample A54		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
2GL88T		144.50	2.06	1.46	143.10	-0.06	-0.04
2HRZKD		143.00	0.56	0.40	142.00	-1.16	-0.80
3VK6GQ		143.02	0.58	0.41	144.43	1.27	0.88
4C4M7B		141.99	-0.45	-0.32	141.38	-1.78	-1.23
6DT77A		143.50	1.06	0.75	143.10	-0.06	-0.04
6FYEP2		142.32	-0.11	-0.08	144.64	1.48	1.03
77U9EQ		143.00	0.56	0.40	143.80	0.64	0.45
8A6BFM		142.00	-0.44	-0.31	143.30	0.14	0.10
94FNBL		144.00	1.56	1.11	145.30	2.14	1.49
9YFRT2		141.42	-1.02	-0.72	143.16	0.00	0.00
ANUM47		141.41	-1.03	-0.73	141.41	-1.74	-1.21
BJY82C	M	143.70	1.26	0.89	No Data Reported		
CPGNV9		142.60	0.16	0.11	145.50	2.34	1.63
CTMCPJ		142.80	0.36	0.26	144.30	1.14	0.79
CURG78		141.80	-0.64	-0.45	143.90	0.74	0.52
DNHCNX		141.95	-0.49	-0.35	140.44	-2.71	-1.88
DURWZJ		142.50	0.06	0.04	144.10	0.94	0.66
F3BMA7		145.50	3.06	2.17	144.10	0.94	0.66
F4QT2H		144.15	1.72	1.22	143.63	0.47	0.33
F83F7G	*	145.50	3.06	2.17	146.60	3.44	2.39
F9FJU7		141.00	-1.44	-1.02	140.66	-2.49	-1.73
FX43C2		141.70	-0.74	-0.52	142.86	-0.29	-0.20
G783G3		142.00	-0.44	-0.31	143.00	-0.16	-0.11
GJWYH2		142.72	0.28	0.20	144.66	1.50	1.04
H6CDHX		141.57	-0.87	-0.62	141.93	-1.23	-0.85
HLXGVM		141.60	-0.84	-0.59	143.50	0.34	0.24
J68JCW		142.72	0.28	0.20	144.02	0.87	0.60
JHBTQ7		145.10	2.66	1.89	143.60	0.44	0.31
K9AGMP		142.51	0.07	0.05	143.80	0.65	0.45
LU7FD9		142.30	-0.14	-0.10	143.90	0.74	0.52
MMW9ZW		140.17	-2.27	-1.61	141.49	-1.67	-1.16
NBJCT8		141.70	-0.74	-0.52	142.80	-0.36	-0.25
NLY3CB		142.86	0.42	0.30	143.01	-0.15	-0.10
NRN876		142.60	0.16	0.11	141.50	-1.66	-1.15
PKZGWN		144.00	1.56	1.11	143.00	-0.16	-0.11
Q3U7JV	*	140.00	-2.44	-1.73	139.20	-3.96	-2.75
Q3X3DA		142.14	-0.30	-0.21	143.59	0.43	0.30
QN283U		140.70	-1.74	-1.23	141.64	-1.51	-1.05
QTA9YR		141.13	-1.31	-0.93	142.96	-0.20	-0.14
R4RPDA		142.90	0.46	0.33	141.70	-1.46	-1.01
R6ZWG3	*	145.33	2.89	2.05	142.72	-0.44	-0.30
R8Q4YE		139.70	-2.74	-1.94	142.78	-0.38	-0.26
R9KR74		143.60	1.16	0.82	145.90	2.74	1.91
T2EXU2		143.23	0.79	0.56	144.21	1.06	0.73
TW84N3		139.89	-2.55	-1.81	141.03	-2.12	-1.47
TYDC7V	X	145.92	3.48	2.47	149.56	6.41	4.45
UTKNQF		140.24	-2.20	-1.56	141.80	-1.36	-0.94

		Sample A53			Sample A54		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
VDK6FH	X	146.78	4.34	3.08	142.86	-0.29	-0.20
VEHKYU		142.00	-0.44	-0.31	144.00	0.84	0.59
VLEEXT	X	145.20	2.76	1.96	149.36	6.20	4.31
WQREUJ		141.60	-0.84	-0.59	142.80	-0.36	-0.25
XXHGBL		141.82	-0.62	-0.44	143.66	0.50	0.35
YEMQLF		142.14	-0.30	-0.21	143.30	0.14	0.10
Z69U7T		144.00	1.56	1.11	144.60	1.44	1.00

Summary Statistics

	Sample A53		Sample A54	
Grand Means	142.44	ksi	143.16	ksi
Stnd Dev Btwn Labs	1.41	ksi	1.44	ksi

Samples A53, A54 : AISI 4340 (L), AISI 4340 (S)

Statistics based on 50 of 54 reporting participants

Comments on Assigned Data Flags for Test #110

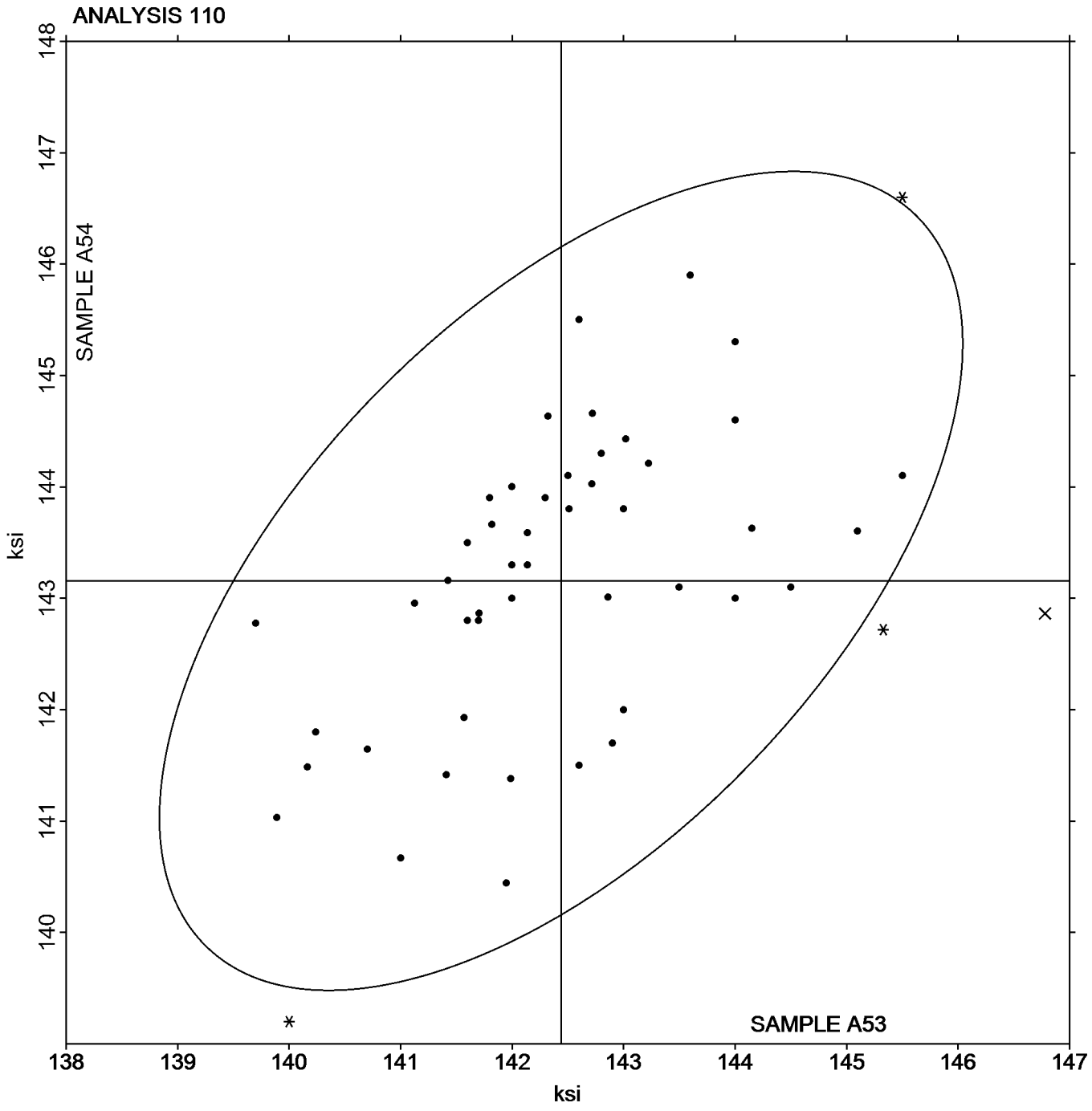
BJY82C (M) - Participant did not submit data for sample A54.

TYDC7V (X) - Data for sample A54 are high.

VDK6FH (X) - Data for sample A53 are high.

VLEEXT (X) - Data for sample A54 are high.

SAMPLE A53	SAMPLE A54
142.44 ksi	143.16 ksi



		Sample A53			Sample A54		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
2GL88T		115.90	1.54	1.06	112.90	-2.42	-1.29
2HRZKD		115.00	0.64	0.44	114.00	-1.32	-0.70
3VK6GQ		113.56	-0.80	-0.55	115.60	0.28	0.15
4C4M7B		115.94	1.58	1.09	114.71	-0.62	-0.33
6DT77A		114.30	-0.06	-0.04	114.80	-0.52	-0.28
6FYEP2	*	110.09	-4.26	-2.94	116.02	0.69	0.37
77U9EQ		113.40	-0.96	-0.66	114.70	-0.62	-0.33
8A6BFM		113.20	-1.16	-0.80	116.20	0.88	0.47
94FNBL		114.80	0.44	0.31	117.30	1.98	1.05
9YFRT2		113.56	-0.80	-0.55	115.96	0.64	0.34
ANUM47		114.73	0.37	0.25	114.87	-0.45	-0.24
BJY82C	M	114.26	-0.09	-0.06	No Data Reported		
CPGNV9		113.40	-0.96	-0.66	117.30	1.98	1.05
CTMCPJ		114.90	0.54	0.37	117.60	2.28	1.21
CURG78	X	109.10	-5.26	-3.63	115.90	0.58	0.31
DNHCNX		115.37	1.01	0.70	113.25	-2.08	-1.10
DURWZJ		114.70	0.34	0.24	117.20	1.88	1.00
F3BMA7		115.71	1.35	0.93	113.15	-2.18	-1.16
F4QT2H		117.80	3.44	2.38	116.79	1.47	0.78
F83F7G		115.30	0.94	0.65	117.00	1.68	0.89
F9FJU7		113.30	-1.05	-0.73	112.55	-2.77	-1.47
FX43C2		112.41	-1.95	-1.35	113.86	-1.47	-0.78
G783G3	X	121.00	6.64	4.58	116.00	0.68	0.36
GJWYH2		116.72	2.36	1.63	118.81	3.49	1.85
H6CDHX		112.88	-1.48	-1.02	113.72	-1.60	-0.85
HLXGVM		112.60	-1.76	-1.21	115.30	-0.02	-0.01
J68JCW		113.13	-1.23	-0.85	115.16	-0.16	-0.09
JHBTQ7		115.90	1.54	1.06	114.50	-0.82	-0.44
K9AGMP		113.68	-0.68	-0.47	114.75	-0.58	-0.31
LU7FD9		113.30	-1.06	-0.73	115.60	0.28	0.15
MMW9ZW		113.99	-0.37	-0.26	114.15	-1.18	-0.63
NLY3CB		113.71	-0.65	-0.45	116.76	1.43	0.76
NRN876		114.50	0.14	0.10	113.50	-1.82	-0.97
PKZGWN		116.00	1.64	1.13	114.00	-1.32	-0.70
Q3U7JV		113.70	-0.66	-0.45	111.00	-4.32	-2.30
Q3X3DA		114.15	-0.21	-0.15	114.58	-0.74	-0.40
QN283U		114.88	0.53	0.36	114.74	-0.59	-0.31
QTA9YR		115.23	0.87	0.60	116.53	1.20	0.64
R4RPDA		114.50	0.14	0.10	112.50	-2.82	-1.50
R6ZWG3	X	133.00	18.64	12.86	135.03	19.71	10.48
R8Q4YE		112.11	-2.24	-1.55	114.82	-0.51	-0.27
R9KR74		115.00	0.64	0.44	118.40	3.08	1.64
T2EXU2		113.96	-0.40	-0.28	116.06	0.74	0.39
TW84N3		114.95	0.59	0.41	114.68	-0.64	-0.34
TYDC7V	*	115.51	1.15	0.79	120.74	5.42	2.88
UTKNQF		112.16	-2.20	-1.52	114.23	-1.09	-0.58
VDK6FH	*	117.92	3.56	2.46	114.58	-0.74	-0.40

		Sample A53			Sample A54		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
VEHKYU	X	125.00	10.64	7.34	117.00	1.68	0.89
VLEEXT		115.09	0.73	0.50	119.28	3.96	2.10
WQREUJ		113.80	-0.56	-0.38	115.20	-0.12	-0.07
XXHGBL		113.55	-0.81	-0.56	114.81	-0.51	-0.27
YEMQLF	X	123.86	9.51	6.56	125.31	9.99	5.31
Z69U7T		114.50	0.14	0.10	116.10	0.78	0.41

Summary Statistics

	Sample A53		Sample A54	
Grand Means	114.36	ksi	115.32	ksi
Stnd Dev Btwn Labs	1.45	ksi	1.88	ksi

Samples A53, A54 : AISI 4340 (L), AISI 4340 (S)

Statistics based on 47 of 53 reporting participants

Comments on Assigned Data Flags for Test #111

BJY82C (M) - Participant did not submit data for sample A54.

CURG78 (X) - Data for sample A53 are low.

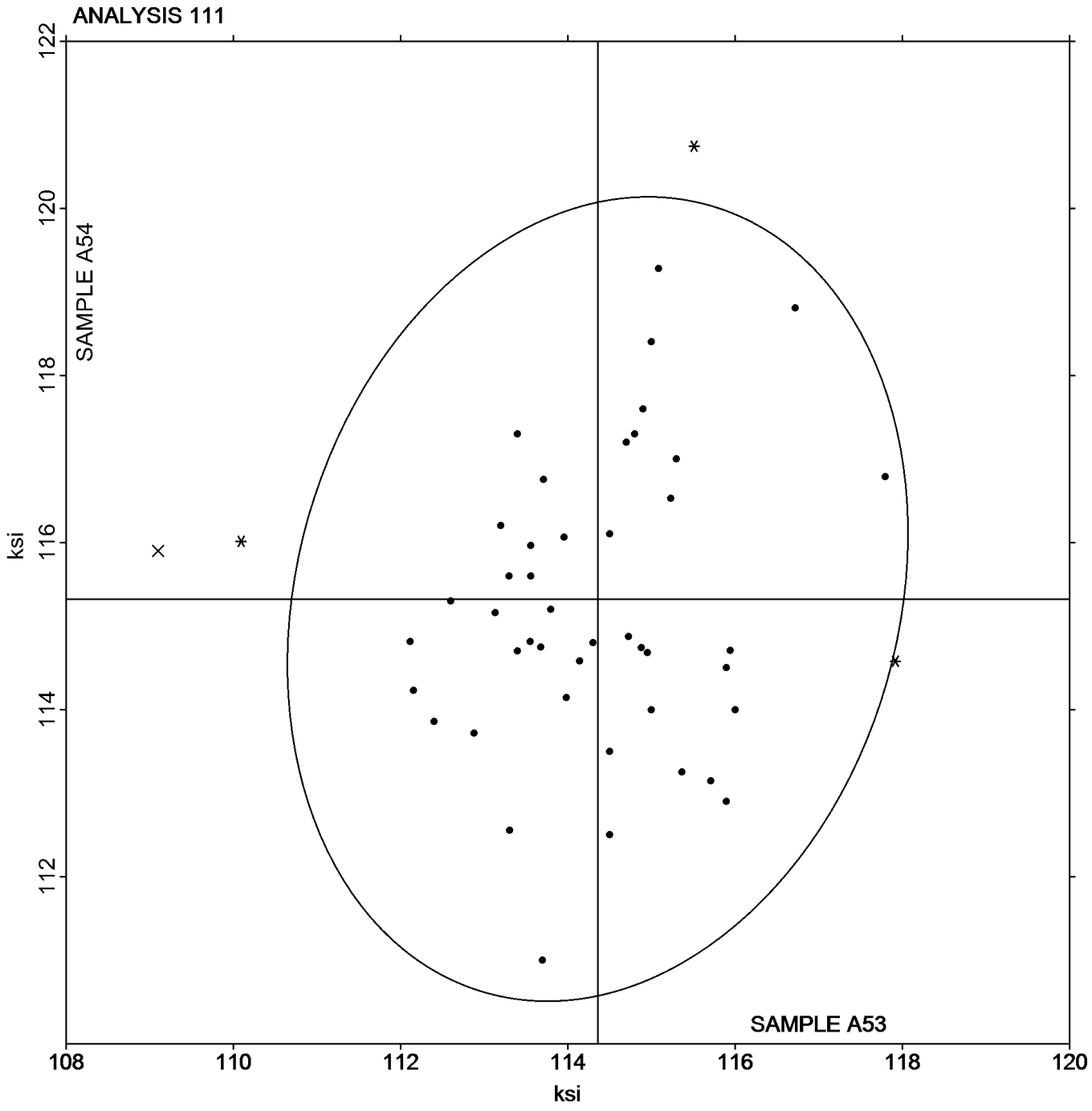
G783G3 (X) - Data for sample A53 are high.

R6ZWG3 (X) - Data for both samples are high.

VEHKYU (X) - Data for sample A53 are high.

YEMQLF (X) - Data for both samples are high.

SAMPLE A53	SAMPLE A54
114.36 ksi	115.32 ksi



		Sample A53			Sample A54		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
2GL88T		17.70	0.34	0.46	18.20	0.56	0.62
2HRZKD		17.00	-0.36	-0.49	17.00	-0.64	-0.72
3VK6GQ		17.00	-0.36	-0.49	16.60	-1.04	-1.17
4C4M7B		18.42	1.06	1.44	18.51	0.87	0.97
6DT77A		18.30	0.94	1.28	19.20	1.56	1.74
6FYEP2		16.55	-0.81	-1.10	17.20	-0.44	-0.50
77U9EQ		18.00	0.64	0.87	18.00	0.36	0.40
8A6BFM		17.20	-0.16	-0.22	17.90	0.26	0.29
94FNBL		17.50	0.14	0.19	17.00	-0.64	-0.72
9YFRT2		16.22	-1.14	-1.55	17.52	-0.12	-0.14
ANUM47		17.30	-0.06	-0.08	17.80	0.16	0.17
BJY82C	M	22.39	5.03	6.84	No Data Reported		
CPGNV9		17.00	-0.36	-0.49	16.80	-0.84	-0.94
CTMCPJ		16.90	-0.46	-0.62	15.80	-1.84	-2.06
CURG78		17.20	-0.16	-0.22	16.60	-1.04	-1.17
DNHCNX		17.29	-0.07	-0.09	17.73	0.09	0.10
DURWZJ		17.80	0.44	0.60	16.50	-1.14	-1.28
F3BMA7	X	20.00	2.64	3.59	20.50	2.86	3.19
F4QT2H		17.74	0.38	0.52	18.00	0.36	0.40
F83F7G		17.10	-0.26	-0.35	17.28	-0.36	-0.41
F9FJU7		16.40	-0.96	-1.30	17.44	-0.20	-0.23
FX43C2		17.10	-0.26	-0.35	17.20	-0.44	-0.50
G783G3		18.00	0.64	0.87	18.00	0.36	0.40
GJWYH2		17.05	-0.31	-0.42	18.75	1.11	1.23
H6CDHX		18.00	0.64	0.87	18.00	0.36	0.40
HLXGVM		17.30	-0.06	-0.08	17.20	-0.44	-0.50
J68JCW		16.80	-0.56	-0.76	17.30	-0.34	-0.38
JHBTQ7	*	19.42	2.06	2.81	19.62	1.98	2.21
K9AGMP		17.57	0.21	0.29	18.07	0.43	0.48
LU7FD9		16.90	-0.46	-0.62	16.80	-0.84	-0.94
MMW9ZW		17.80	0.44	0.60	17.30	-0.34	-0.38
NBJCT8		16.40	-0.96	-1.30	17.10	-0.54	-0.61
NLY3CB		16.80	-0.56	-0.76	17.70	0.06	0.06
NRN876		17.30	-0.06	-0.08	17.30	-0.34	-0.38
PKZGWN	*	18.00	0.64	0.87	20.00	2.36	2.63
Q3U7JV		18.80	1.44	1.96	19.20	1.56	1.74
Q3X3DA		17.50	0.14	0.19	18.20	0.56	0.62
QN283U		17.95	0.59	0.80	18.10	0.46	0.51
QTA9YR	*	17.78	0.42	0.57	15.65	-1.99	-2.23
R4RPDA		17.80	0.44	0.60	18.80	1.16	1.29
R6ZWG3		18.20	0.84	1.15	17.70	0.06	0.06
R8Q4YE		19.00	1.64	2.23	18.50	0.86	0.96
R9KR74		16.50	-0.86	-1.17	16.50	-1.14	-1.28
T2EXU2		16.90	-0.46	-0.62	17.30	-0.34	-0.38
TW84N3		17.60	0.24	0.33	17.84	0.19	0.21
TYDC7V		16.80	-0.56	-0.76	17.70	0.06	0.06
UTKNQF		15.95	-1.41	-1.92	17.10	-0.54	-0.61

WebCode	Data Flag	Sample A53 Lab Mean	Sample A53 Diff. from Grand Mean	Sample A53 CPV	Sample A54 Lab Mean	Sample A54 Diff. from Grand Mean	Sample A54 CPV
VDK6FH		17.00	-0.36	-0.49	17.00	-0.64	-0.72
VEHKYU		15.70	-1.66	-2.26	16.50	-1.14	-1.28
VLEEXT		17.00	-0.36	-0.49	17.50	-0.14	-0.16
VX9DFR		16.50	-0.86	-1.17	18.60	0.96	1.07
WQREUJ		17.50	0.14	0.19	17.00	-0.64	-0.72
XXHGBL		17.40	0.04	0.06	18.80	1.16	1.29
YEMQLF	X	12.50	-4.86	-6.61	14.20	-3.44	-3.85
Z69U7T		17.70	0.34	0.46	18.10	0.46	0.51

Summary Statistics

	Sample A53		Sample A54	
Grand Means	17.36	Percent	17.64	Percent
Stnd Dev Btwn Labs	0.73	Percent	0.90	Percent

Samples A53, A54 : AISI 4340 (L), AISI 4340 (S)

Statistics based on 52 of 55 reporting participants

Comments on Assigned Data Flags for Test #112

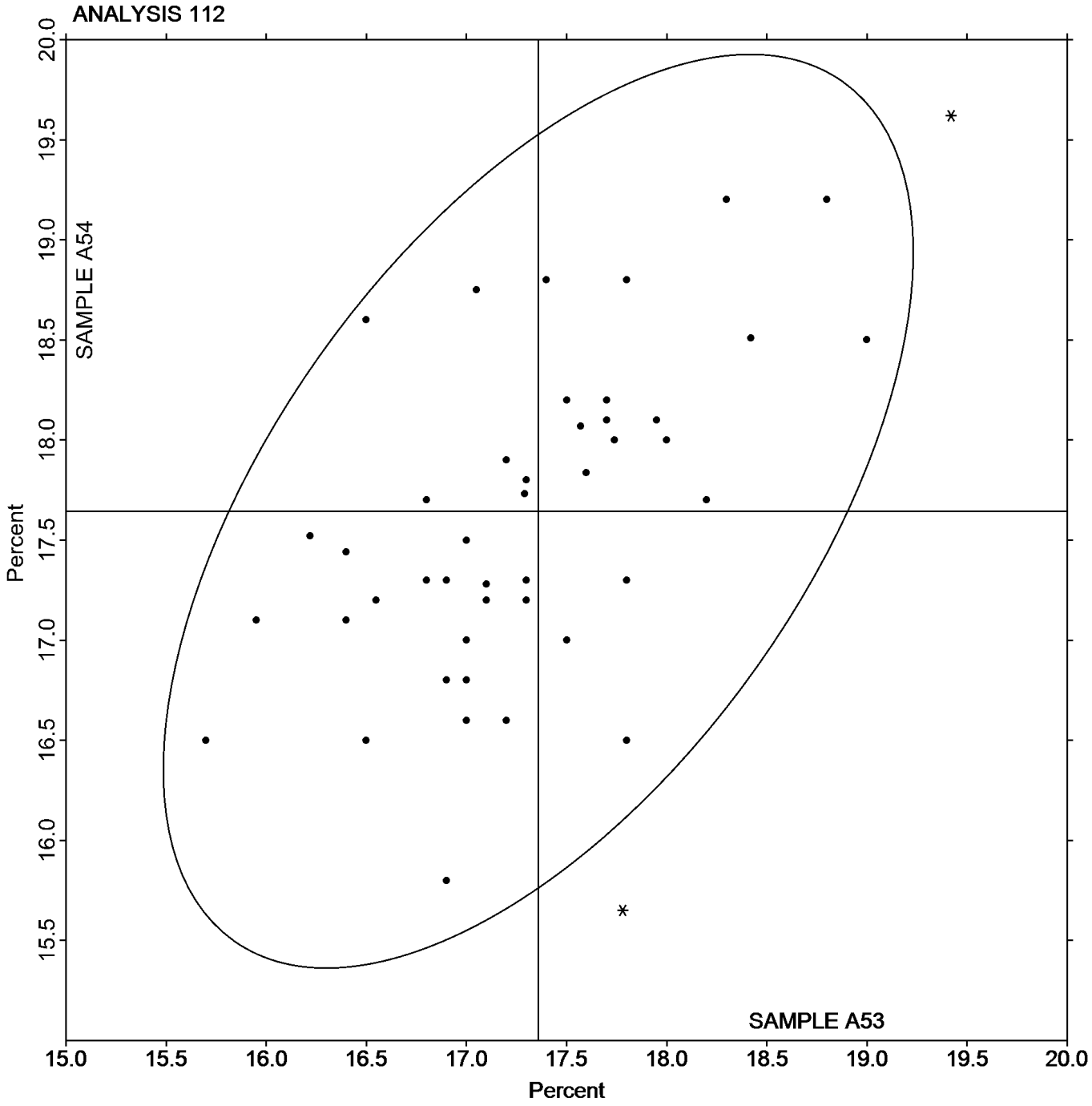
BJY82C (M) - Participant did not submit data for sample A54.

F3BMA7 (X) - Data for both samples are high.

YEMQLF (X) - Data for both samples are low.

SAMPLE A53
17.36 Percent

SAMPLE A54
17.64 Percent



		Sample A53			Sample A54		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
2GL88T		54.10	1.81	1.47	52.80	-0.70	-0.24
2HRZKD		53.00	0.71	0.58	57.00	3.50	1.21
3VK6GQ		54.30	2.01	1.64	55.40	1.90	0.65
4C4M7B		52.29	0.00	0.00	53.37	-0.13	-0.05
6DT77A		53.50	1.21	0.99	55.90	2.40	0.83
6FYEP2		50.08	-2.21	-1.80	54.00	0.50	0.17
77U9EQ		53.70	1.41	1.15	55.40	1.90	0.65
8A6BFM		50.80	-1.49	-1.21	54.70	1.20	0.41
94FNBL		52.70	0.41	0.33	53.20	-0.30	-0.10
9YFRT2	*	49.04	-3.25	-2.64	50.08	-3.42	-1.18
ANUM47		52.30	0.01	0.01	56.50	3.00	1.03
CPGNV9		53.20	0.91	0.74	48.60	-4.90	-1.69
CTMCPJ		52.30	0.01	0.01	46.30	-7.20	-2.49
CURG78		52.00	-0.29	-0.23	53.30	-0.20	-0.07
DNHCNX		53.13	0.84	0.68	55.18	1.68	0.58
DURWZJ		51.10	-1.19	-0.97	47.80	-5.70	-1.97
F3BMA7		54.30	2.01	1.63	54.84	1.33	0.46
F4QT2H		51.06	-1.23	-1.00	57.15	3.64	1.26
F83F7G		51.73	-0.56	-0.45	54.97	1.47	0.51
F9FJU7		53.18	0.89	0.73	54.75	1.24	0.43
FX43C2		51.50	-0.79	-0.64	51.60	-1.90	-0.66
G783G3		53.00	0.71	0.58	54.00	0.50	0.17
GJWYH2		51.37	-0.92	-0.75	54.89	1.39	0.48
H6CDHX		52.00	-0.29	-0.23	56.00	2.50	0.86
HLXGVM		53.30	1.01	0.82	55.50	2.00	0.69
J68JCW		51.90	-0.39	-0.32	53.90	0.40	0.14
JHBTQ7		53.70	1.41	1.15	54.80	1.30	0.45
K9AGMP		53.57	1.28	1.04	55.24	1.74	0.60
LU7FD9		52.70	0.41	0.33	48.60	-4.90	-1.69
MMW9ZW		52.80	0.51	0.42	54.90	1.40	0.48
NBJCT8		50.60	-1.69	-1.37	53.90	0.40	0.14
NLY3CB		50.60	-1.69	-1.37	53.30	-0.20	-0.07
NRN876		53.60	1.31	1.07	55.80	2.30	0.79
PKZGWN		50.00	-2.29	-1.86	54.00	0.50	0.17
Q3U7JV		53.64	1.35	1.10	55.47	1.97	0.68
Q3X3DA		51.00	-1.29	-1.05	55.00	1.50	0.52
QN283U		52.41	0.12	0.10	55.20	1.70	0.59
QTA9YR	*	52.15	-0.14	-0.11	44.48	-9.02	-3.11
R4RPDA		52.10	-0.19	-0.15	56.20	2.70	0.93
R6ZWG3		52.80	0.51	0.42	48.96	-4.54	-1.57
R8Q4YE		53.20	0.91	0.74	52.90	-0.60	-0.21
R9KR74	*	49.60	-2.69	-2.19	48.00	-5.50	-1.90
T2EXU2		51.20	-1.09	-0.89	54.20	0.70	0.24
TW84N3		51.66	-0.63	-0.51	56.29	2.78	0.96
TYDC7V		53.00	0.71	0.58	52.00	-1.50	-0.52
UTKNQF		50.72	-1.57	-1.28	55.11	1.61	0.55
VDK6FH		52.50	0.21	0.17	54.50	1.00	0.34

WebCode	Data Flag	Sample A53 Lab Mean	Sample A53 Diff. from Grand Mean	Sample A53 CPV	Sample A54 Lab Mean	Sample A54 Diff. from Grand Mean	Sample A54 CPV
VEHKYU		53.20	0.91	0.74	55.10	1.60	0.55
VLEEXT		52.00	-0.29	-0.23	50.00	-3.50	-1.21
VX9DFR		52.10	-0.19	-0.15	54.20	0.70	0.24
WQREUJ		53.76	1.47	1.20	48.36	-5.14	-1.77
XXHGBL		52.60	0.31	0.25	56.00	2.50	0.86
YEMQLF		52.00	-0.29	-0.23	55.00	1.50	0.52
Z69U7T		53.50	1.21	0.99	54.60	1.10	0.38

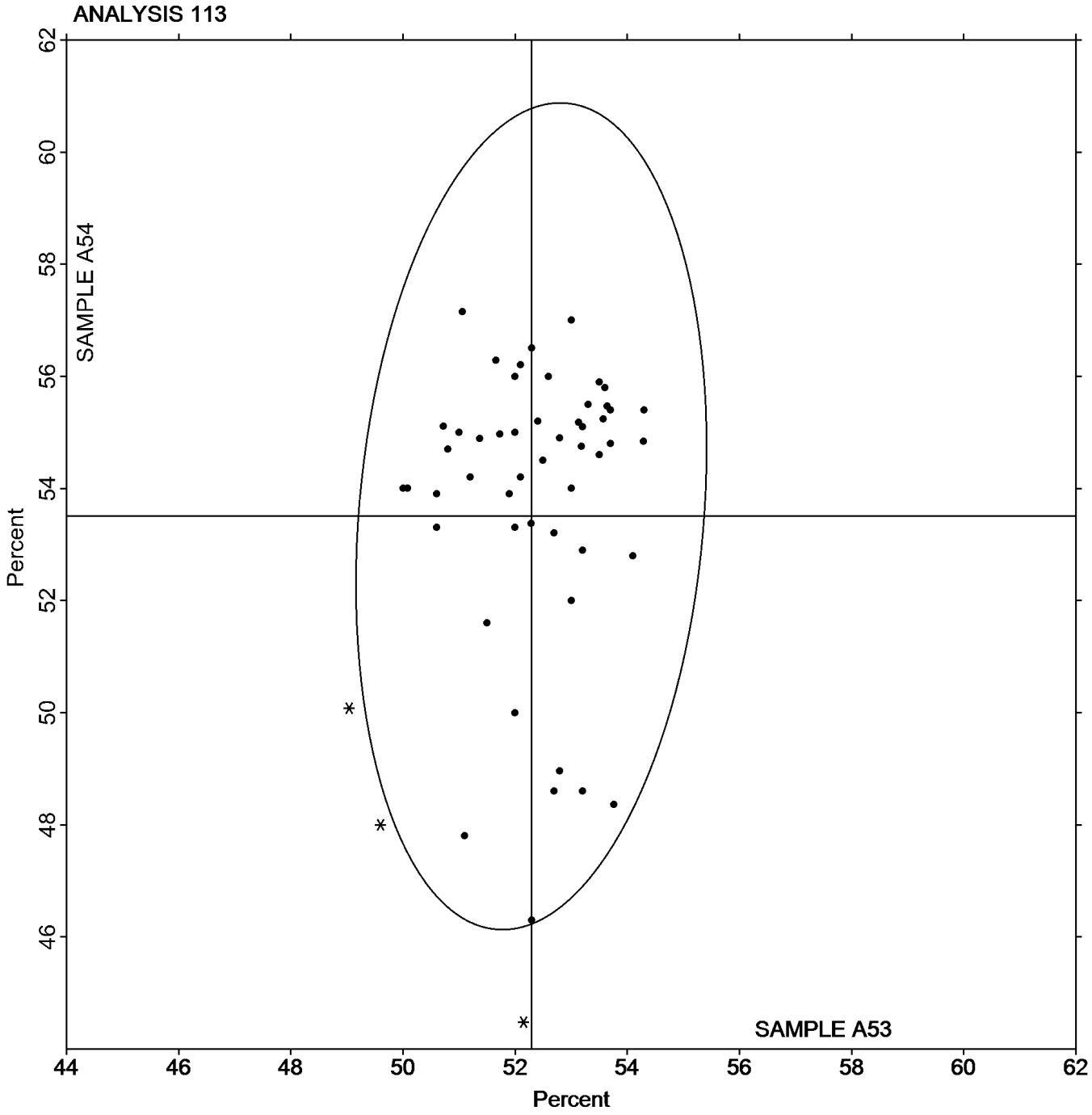
Summary Statistics

	Sample A53		Sample A54	
Grand Means	52.29	Percent	53.50	Percent
Stnd Dev Btwn Labs	1.23	Percent	2.90	Percent

Samples A53, A54 : AISI 4340 (L), AISI 4340 (S)

Statistics based on 54 of 54 reporting participants

SAMPLE A53	SAMPLE A54
52.29 Percent	53.50 Percent



		Sample N53			Sample N54		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
23LZ2J		94.06	0.02	0.03	94.92	0.47	1.05
2GL88T		93.92	-0.12	-0.27	94.28	-0.17	-0.37
2NZULB		93.80	-0.24	-0.53	94.14	-0.31	-0.68
364B8T		93.94	-0.10	-0.23	94.62	0.17	0.38
3RZH6W		94.26	0.22	0.47	94.76	0.31	0.70
426APB		94.26	0.22	0.48	94.42	-0.03	-0.07
4443GV		94.62	0.58	1.26	94.62	0.17	0.38
47FH9B		94.68	0.64	1.39	95.20	0.75	1.67
49XXFG		92.94	-1.10	-2.42	93.40	-1.05	-2.32
4NZQCQ		93.78	-0.26	-0.58	94.44	-0.01	-0.02
6APHKR		94.64	0.60	1.30	94.82	0.37	0.83
6DT77A		93.86	-0.18	-0.40	94.56	0.11	0.25
6FYEP2		94.70	0.66	1.44	95.34	0.89	1.98
6L4TGN	*	94.48	0.44	0.95	95.44	0.99	2.21
6UUCKB		93.68	-0.36	-0.80	94.24	-0.21	-0.46
6W2FZE		94.32	0.28	0.60	94.84	0.39	0.87
78Z7LM		94.96	0.92	2.01	95.02	0.57	1.27
7MUX7N		93.94	-0.10	-0.23	94.52	0.07	0.16
8WVKUE		93.60	-0.44	-0.97	93.60	-0.85	-1.88
97HJ3N		95.00	0.96	2.09	95.10	0.65	1.45
97ZCZD	*	92.78	-1.26	-2.77	93.18	-1.27	-2.81
9U7RFA		94.00	-0.04	-0.10	94.40	-0.05	-0.10
9X3ZKA		93.56	-0.49	-1.07	93.69	-0.75	-1.68
9ZUAW8		93.52	-0.52	-1.15	93.92	-0.53	-1.17
A2M7JX		94.38	0.34	0.74	94.66	0.21	0.47
AQZN4D		94.46	0.42	0.91	94.86	0.41	0.92
BJG6LP		94.00	-0.04	-0.10	94.20	-0.25	-0.55
C3NAH8		93.82	-0.22	-0.49	94.52	0.07	0.16
C4KB6G		93.62	-0.42	-0.93	94.36	-0.09	-0.19
CJCABH		93.96	-0.08	-0.18	94.16	-0.29	-0.64
CUGAVH		94.32	0.28	0.60	94.64	0.19	0.43
DF9V64		94.48	0.44	0.95	94.76	0.31	0.70
DNHCNX	X	95.96	1.92	4.19	96.32	1.87	4.16
DPBTN8		93.40	-0.64	-1.41	93.50	-0.95	-2.10
DQQFMF		94.14	0.10	0.21	94.66	0.21	0.47
DURWZJ		94.26	0.22	0.47	94.90	0.45	1.01
EHVY8A		93.92	-0.12	-0.27	94.14	-0.31	-0.68
FBA34K		93.70	-0.34	-0.75	94.05	-0.40	-0.88
FKCHR6		94.50	0.46	1.00	94.50	0.05	0.12
FYFP7A		94.52	0.48	1.04	94.82	0.37	0.83
G783G3		94.14	0.10	0.21	94.54	0.09	0.21
GCGP9C		94.24	0.20	0.43	94.74	0.29	0.65
GQXV4C		93.90	-0.14	-0.32	94.42	-0.03	-0.06
GT7WDC		93.00	-1.04	-2.29	93.68	-0.77	-1.70
GUYPCE		94.76	0.72	1.57	95.08	0.63	1.41
HMVRUB		93.90	-0.14	-0.32	94.20	-0.25	-0.55
JJA6WG		93.36	-0.68	-1.50	94.14	-0.31	-0.68

		Sample N53			Sample N54		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
JUVQ9W		93.28	-0.76	-1.67	93.86	-0.59	-1.30
K734WB	X	92.60	-1.44	-3.16	93.00	-1.45	-3.21
K76QFA		93.86	-0.18	-0.40	94.26	-0.19	-0.42
K7JNPV		93.74	-0.30	-0.67	93.76	-0.69	-1.53
K8EEQ4		93.88	-0.16	-0.36	94.06	-0.39	-0.86
KG3P6V		94.16	0.12	0.25	94.38	-0.07	-0.15
KHVFTV		94.48	0.44	0.95	94.68	0.23	0.52
LERBU8		94.50	0.46	1.00	95.00	0.55	1.23
LU7FD9		94.44	0.40	0.87	94.86	0.41	0.92
LZ8ZX4		93.38	-0.66	-1.45	93.72	-0.73	-1.61
MENHU9		94.04	0.00	-0.01	94.58	0.13	0.30
MJFMY3		94.32	0.28	0.60	94.94	0.49	1.09
MKTTU7		94.14	0.10	0.21	94.42	-0.03	-0.06
MR97LX		93.96	-0.08	-0.18	94.48	0.03	0.07
NFD7TU		94.16	0.12	0.25	94.68	0.23	0.52
NFDB3W		94.10	0.06	0.12	94.70	0.25	0.56
NRN876		94.00	-0.04	-0.10	94.36	-0.09	-0.19
NT3P7P		94.08	0.04	0.08	94.66	0.21	0.47
NZ399K		93.76	-0.28	-0.62	94.46	0.01	0.03
P67URH		93.94	-0.10	-0.23	94.60	0.15	0.34
P7HPA3		94.56	0.52	1.13	94.98	0.53	1.18
Q8CYJB		93.72	-0.32	-0.71	94.18	-0.27	-0.59
Q8WVFB		94.14	0.10	0.21	94.66	0.21	0.47
QETBWC		94.78	0.74	1.61	95.20	0.75	1.67
QF6GBR		94.00	-0.04	-0.10	94.00	-0.45	-0.99
QFPBW2		94.88	0.84	1.83	94.84	0.39	0.87
QGLLZH		93.54	-0.50	-1.10	94.12	-0.33	-0.73
QJKFR2		94.06	0.02	0.03	94.52	0.07	0.16
QKGFVX		93.60	-0.44	-0.97	93.70	-0.75	-1.66
QLQZF2		94.54	0.50	1.09	94.98	0.53	1.18
QNVQKV		94.16	0.12	0.25	94.72	0.27	0.61
R4PFD8		93.96	-0.08	-0.18	94.36	-0.09	-0.19
R4RPDA		94.12	0.08	0.17	94.76	0.31	0.70
R7UPAZ	X	93.30	-0.74	-1.63	92.60	-1.85	-4.10
R9L4UE		94.06	0.02	0.03	94.68	0.23	0.52
RBA393		93.97	-0.07	-0.16	94.54	0.10	0.22
RBPWQX		94.48	0.44	0.95	94.92	0.47	1.05
RVXL2Z		94.26	0.22	0.47	94.22	-0.23	-0.50
RXYU7B	X	93.16	-0.88	-1.94	94.38	-0.07	-0.15
RZPVBY		93.44	-0.60	-1.32	94.16	-0.29	-0.64
TW2NHP		93.74	-0.30	-0.67	94.24	-0.21	-0.46
U3PGTP		94.32	0.28	0.60	94.36	-0.09	-0.19
UB29MU		94.38	0.34	0.74	94.74	0.29	0.65
UJQ2QD		93.74	-0.30	-0.67	93.96	-0.49	-1.08
UTKNQF		94.14	0.10	0.21	94.52	0.07	0.16
V4EANX		94.58	0.54	1.17	94.84	0.39	0.87
V4V469		94.02	-0.02	-0.05	94.02	-0.43	-0.95

		Sample N53			Sample N54		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
V9TZVE		93.72	-0.32	-0.71	93.88	-0.57	-1.26
VDJUQ2		93.80	-0.24	-0.53	94.60	0.15	0.34
VJT7PM		94.40	0.36	0.78	94.64	0.19	0.43
VMMABD		93.92	-0.12	-0.27	94.60	0.15	0.34
W3EAYR		93.36	-0.68	-1.50	93.64	-0.81	-1.79
W8DZCP		94.72	0.68	1.48	95.20	0.75	1.67
W8RAWJ		94.16	0.12	0.25	94.34	-0.11	-0.24
WAJPEX		93.80	-0.24	-0.53	94.00	-0.45	-0.99
X2GDRA		93.42	-0.62	-1.37	93.94	-0.51	-1.13
X7D3B3		94.98	0.94	2.05	95.24	0.79	1.76
XE8QYJ		93.88	-0.16	-0.36	94.36	-0.09	-0.19
XTPDJ3		93.96	-0.08	-0.18	94.30	-0.15	-0.33
XXHGBL		94.22	0.18	0.38	94.62	0.17	0.38
Y9KYNA	*	93.00	-1.04	-2.29	94.00	-0.45	-0.99
Z7746P		93.54	-0.50	-1.10	93.88	-0.57	-1.26
Z8WXMK		94.90	0.86	1.87	94.98	0.53	1.18
ZGMLHN	X	91.46	-2.58	-5.66	92.54	-1.91	-4.23
ZXH42X		93.46	-0.58	-1.28	93.92	-0.53	-1.17

Summary Statistics

	Sample N53		Sample N54	
Grand Means	94.04	HRB	94.45	HRB
Stnd Dev Btwn Labs	0.46	HRB	0.45	HRB

Samples N53, N54 : Steel, Steel

Statistics based on 107 of 112 reporting participants

Comments on Assigned Data Flags for Test #118

DNHCNX (X) - Data for both samples are high. Possible Systematic Error.

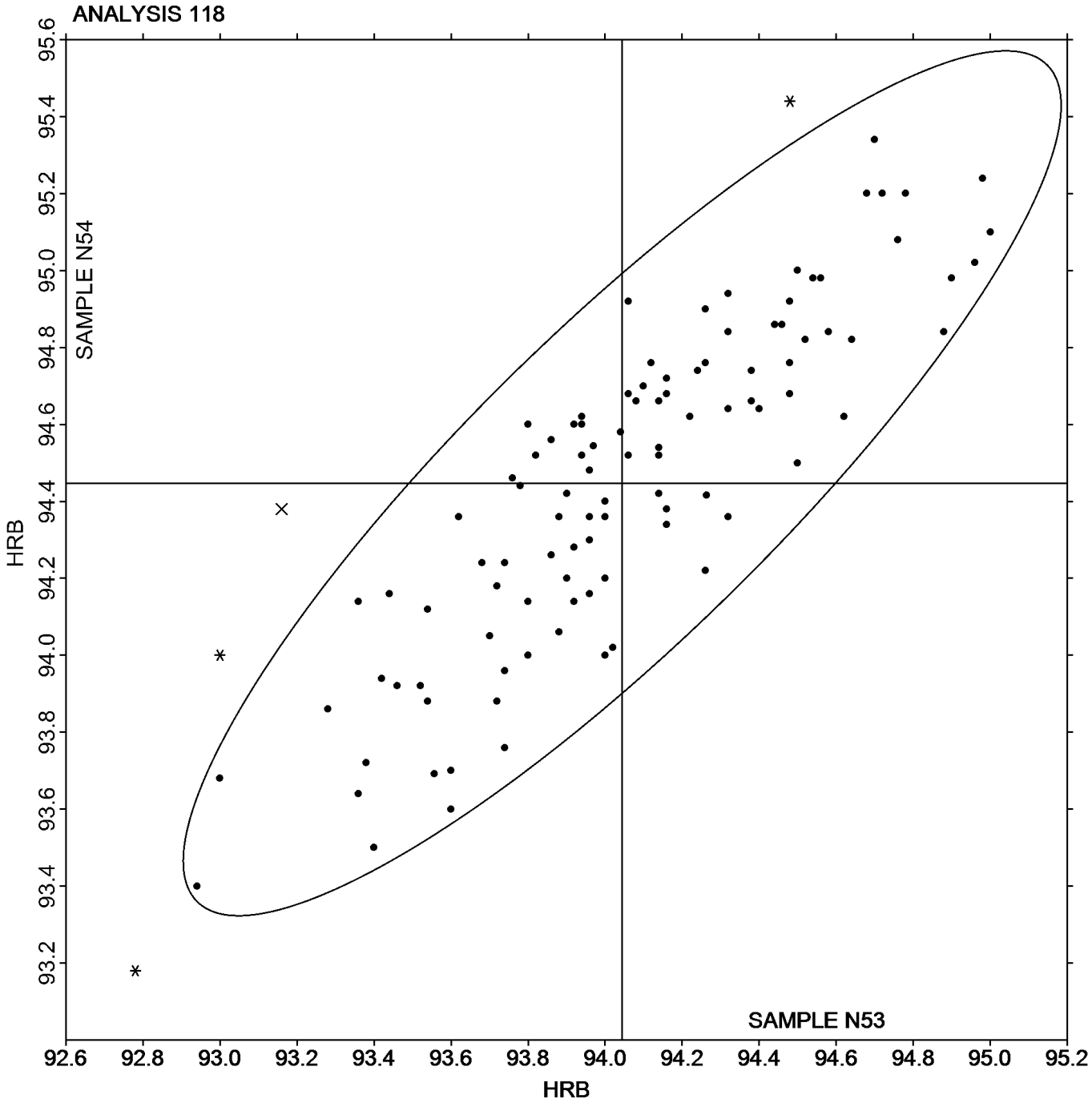
K734WB (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of both samples.

R7UPAZ (X) - Data for sample N54 are low. Inconsistent within the determinations of sample N54.

RXYU7B (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample N53.

ZGMLHN (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of both samples.

SAMPLE N53	SAMPLE N54
94.04 HRB	94.45 HRB



		Sample N53			Sample N54		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
28BJY9		94.40	0.01	0.01	94.74	-0.05	-0.08
2HRZKD		93.86	-0.53	-0.97	94.70	-0.09	-0.16
3VK6GQ		94.24	-0.15	-0.28	94.44	-0.35	-0.62
4AYT7E		93.50	-0.89	-1.62	94.38	-0.41	-0.73
4GDQLL		94.02	-0.37	-0.68	94.20	-0.59	-1.05
4KXVNG	*	96.02	1.63	2.96	96.28	1.49	2.67
4VFL4D		94.80	0.41	0.74	95.12	0.33	0.59
63HW8P		95.28	0.89	1.61	95.42	0.63	1.13
644RKH		94.00	-0.39	-0.72	94.00	-0.79	-1.41
67RBFN		94.16	-0.23	-0.42	94.68	-0.11	-0.19
6L4TGN		94.70	0.31	0.56	95.06	0.27	0.49
6NWLC8		94.00	-0.39	-0.72	95.00	0.21	0.38
77U9EQ		94.04	-0.35	-0.64	94.76	-0.03	-0.05
79RZXM		94.46	0.07	0.12	94.78	-0.01	-0.01
7NMCVR		94.54	0.15	0.27	94.74	-0.05	-0.08
839WYK		95.59	1.20	2.18	96.14	1.35	2.42
8WEVN7	X	91.60	-2.79	-5.08	92.80	-1.99	-3.55
8ZEQCA		93.46	-0.93	-1.70	94.10	-0.69	-1.23
94FNBL		94.68	0.29	0.52	95.16	0.37	0.67
9DWZD6		94.54	0.15	0.27	95.12	0.33	0.59
AF3K26		94.80	0.41	0.74	94.90	0.11	0.20
ATN6DL		94.14	-0.25	-0.46	94.34	-0.45	-0.80
B9WFHK		94.18	-0.21	-0.39	94.50	-0.29	-0.51
BP4EP3		94.86	0.47	0.85	95.08	0.29	0.52
C43FLU		94.62	0.23	0.41	95.16	0.37	0.67
C4DC27		93.74	-0.66	-1.19	94.26	-0.53	-0.94
C6XEXG		94.23	-0.17	-0.30	95.08	0.30	0.53
CN7JGK		94.52	0.13	0.23	94.72	-0.07	-0.12
CTMCPJ		95.38	0.99	1.79	95.82	1.03	1.84
DD48L9		94.86	0.47	0.85	95.12	0.33	0.59
DWTHE9		93.60	-0.79	-1.44	94.05	-0.74	-1.32
E4B3EF		94.36	-0.03	-0.06	94.66	-0.13	-0.23
EKY6NB		94.64	0.25	0.45	94.84	0.05	0.09
ERWWW6		93.80	-0.59	-1.08	94.38	-0.41	-0.73
FKTD8E		94.32	-0.07	-0.13	94.96	0.17	0.31
FVDTC9		93.60	-0.79	-1.44	94.00	-0.79	-1.41
GN7C3K	*	94.39	0.00	-0.01	95.59	0.81	1.44
GRBXWC		93.84	-0.55	-1.01	94.18	-0.61	-1.08
GUEQTW		93.10	-1.29	-2.35	93.84	-0.95	-1.69
GXKGF6		94.38	-0.01	-0.02	95.28	0.49	0.88
GYTAAD		94.48	0.09	0.16	94.66	-0.13	-0.23
H2VRLE		94.10	-0.29	-0.53	94.40	-0.39	-0.69
HLXGVM		94.02	-0.37	-0.68	94.08	-0.71	-1.26
JHDJRA		93.58	-0.81	-1.48	93.86	-0.93	-1.66
JTDKFU		93.76	-0.63	-1.15	94.30	-0.49	-0.87
KWBGMZ		94.16	-0.23	-0.42	94.40	-0.39	-0.69
LB7MEZ		94.00	-0.39	-0.72	94.52	-0.27	-0.48

WebCode	Data Flag	Sample N53 Lab Mean	Sample N53 Diff. from Grand Mean	Sample N53 CPV	Sample N54 Lab Mean	Sample N54 Diff. from Grand Mean	Sample N54 CPV
LKVFLQ		94.40	0.01	0.01	94.36	-0.43	-0.76
LQ4N4V		93.88	-0.51	-0.93	94.10	-0.69	-1.23
LT78VV		95.16	0.77	1.39	95.40	0.61	1.09
MA8A9U		94.60	0.21	0.38	94.70	-0.09	-0.16
MAAFJ3		93.88	-0.51	-0.93	94.32	-0.47	-0.83
MPNMT7	X	97.02	2.63	4.77	97.44	2.65	4.74
N2CQ8Q		93.90	-0.49	-0.90	93.80	-0.99	-1.76
N39GRD		94.42	0.03	0.05	95.24	0.45	0.81
NK9YNA		93.78	-0.61	-1.12	94.28	-0.51	-0.91
NLY3CB		94.32	-0.07	-0.13	94.98	0.19	0.34
NTFXT6		94.58	0.19	0.34	94.96	0.17	0.31
PBFQGH		93.76	-0.63	-1.15	93.96	-0.83	-1.48
PNYX8X		94.30	-0.09	-0.17	94.54	-0.25	-0.44
PWVT6V		94.58	0.19	0.34	94.80	0.01	0.02
Q8QV3N		94.42	0.03	0.05	94.92	0.13	0.24
Q9LD34		93.46	-0.93	-1.69	93.59	-1.20	-2.14
QN283U		94.02	-0.37	-0.68	94.60	-0.19	-0.33
R8Q4YE		93.98	-0.41	-0.75	94.20	-0.59	-1.05
R9KR74		94.88	0.49	0.88	95.36	0.57	1.02
RTUNYK	*	95.60	1.21	2.19	95.38	0.59	1.06
TFC79V		95.00	0.61	1.10	95.34	0.55	0.99
TG9JX9		94.52	0.13	0.23	95.18	0.39	0.70
U447A2		94.52	0.13	0.23	94.76	-0.03	-0.05
UA6Y9H		94.80	0.41	0.74	95.50	0.71	1.27
V4AMN7		94.44	0.05	0.08	94.64	-0.15	-0.26
V4FWMX		94.74	0.35	0.63	94.88	0.09	0.17
VWFDMM		94.96	0.57	1.03	95.52	0.73	1.31
WCK9BE		95.40	1.00	1.83	95.86	1.08	1.92
WWWHHW		94.14	-0.25	-0.46	94.68	-0.11	-0.19
WYXDDT		94.40	0.01	0.01	94.72	-0.07	-0.12
X2PRBV		95.32	0.93	1.68	95.52	0.73	1.31
Y78862		94.70	0.31	0.56	95.06	0.27	0.49
YPLHDE		94.44	0.05	0.08	94.58	-0.21	-0.37
YXYX4T		94.33	-0.07	-0.12	94.69	-0.10	-0.17
Z69U7T		94.76	0.37	0.67	95.06	0.27	0.49
Z6BUFN		95.50	1.11	2.01	96.00	1.21	2.17
ZD4CPP	*	94.38	-0.01	-0.02	95.46	0.67	1.20
ZXT6JQ		94.64	0.25	0.45	94.58	-0.21	-0.37

Summary Statistics

	Sample N53		Sample N54	
Grand Means	94.39	HRB	94.79	HRB
Stnd Dev Btwn Labs	0.55	HRB	0.56	HRB

Samples N53, N54 : Steel, Steel

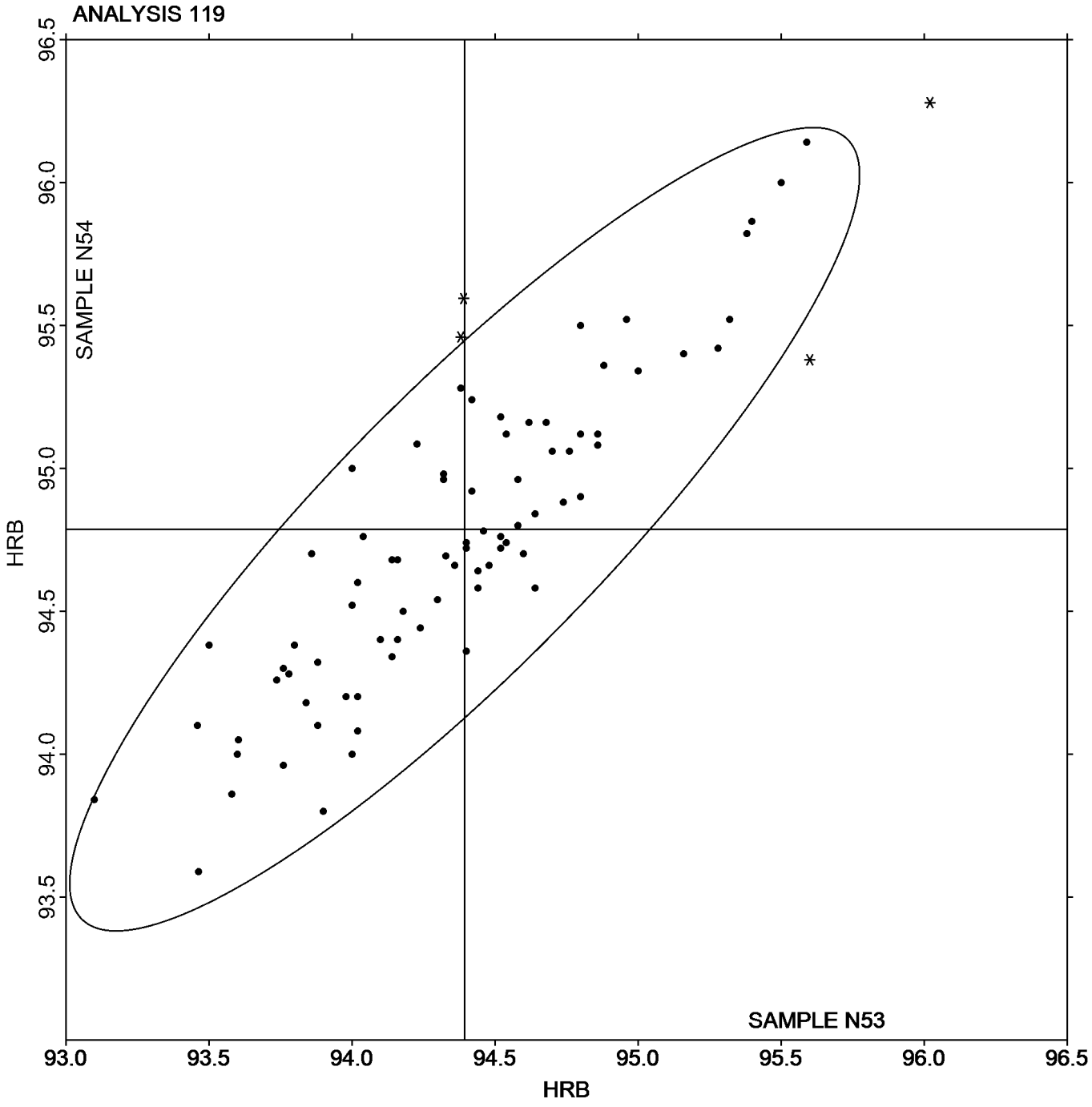
Statistics based on 83 of 85 reporting participants

Comments on Assigned Data Flags for Test #119

8WEVN7 (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of both samples.

MPNMT7 (X) - Data for both samples are high. Possible Systematic Error.

SAMPLE N53	SAMPLE N54
94.39 HRB	94.79 HRB



		Sample S53			Sample S54		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
2C944R		405.20	-10.91	-1.12	448.60	-20.11	-1.63
34ATCT		423.44	7.33	0.75	475.34	6.63	0.54
49XXFG		400.80	-15.31	-1.57	461.00	-7.71	-0.63
4C4M7B		425.00	8.89	0.91	474.40	5.69	0.46
4GFTM3		409.60	-6.51	-0.67	455.80	-12.91	-1.05
4KXVNG		429.92	13.81	1.42	478.74	10.03	0.81
4NZQCQ		424.60	8.49	0.87	467.80	-0.91	-0.07
67RBFN		403.20	-12.91	-1.33	457.40	-11.31	-0.92
6APHKR		415.80	-0.31	-0.03	472.80	4.09	0.33
6FYEP2		401.80	-14.31	-1.47	463.40	-5.31	-0.43
6NQUD7		405.60	-10.51	-1.08	467.80	-0.91	-0.07
6UUCKB		420.00	3.89	0.40	469.00	0.29	0.02
74Y6J4		407.94	-8.17	-0.84	458.32	-10.39	-0.84
77U9EQ		414.60	-1.51	-0.16	461.80	-6.91	-0.56
78Z7LM		418.86	2.75	0.28	465.30	-3.41	-0.28
7MUX7N		415.80	-0.31	-0.03	471.60	2.89	0.23
7NMCVR		426.60	10.49	1.08	481.60	12.89	1.05
8JA9H4		419.40	3.29	0.34	461.60	-7.11	-0.58
8MRJE9		403.60	-12.51	-1.29	460.60	-8.11	-0.66
8WVKUE		414.80	-1.31	-0.13	477.20	8.49	0.69
9U7RFA	X	421.20	5.09	0.52	442.20	-26.51	-2.15
AF3K26		436.80	20.69	2.13	493.00	24.29	1.97
BENM2T		412.80	-3.31	-0.34	472.80	4.09	0.33
CJCABH		409.94	-6.17	-0.63	470.54	1.83	0.15
CUGAVH		423.84	7.73	0.80	483.34	14.63	1.19
DF9V64	*	428.00	11.89	1.22	499.00	30.29	2.46
DQ9CXG		413.80	-2.31	-0.24	462.00	-6.71	-0.55
DRNHGQ		425.51	9.40	0.97	476.45	7.73	0.63
DURWZJ		414.40	-1.71	-0.18	466.00	-2.71	-0.22
DWTHE9		411.00	-5.11	-0.53	456.60	-12.11	-0.98
EHVY8A		425.60	9.49	0.98	481.00	12.29	1.00
ERGDBM		409.40	-6.71	-0.69	461.20	-7.51	-0.61
ERWWW6		427.60	11.49	1.18	478.00	9.29	0.75
EV3LRF		415.40	-0.71	-0.07	466.60	-2.11	-0.17
F83F7G		415.40	-0.71	-0.07	471.00	2.29	0.19
FLQW9L		416.54	0.43	0.04	474.44	5.73	0.47
FQF3RN		417.60	1.49	0.15	463.60	-5.11	-0.42
FT98MM		418.24	2.13	0.22	466.68	-2.03	-0.17
GCGP9C		401.20	-14.91	-1.53	460.00	-8.71	-0.71
GJYKEG	X	427.44	11.33	1.17	504.92	36.21	2.94
GMVD46		404.20	-11.91	-1.22	465.80	-2.91	-0.24
GQGAF3	X	433.60	17.49	1.80	347.80	-120.91	-9.82
H6BLLB	X	408.88	-7.23	-0.74	487.00	18.29	1.49
JHDJRA		417.20	1.09	0.11	459.80	-8.91	-0.72
JLC9KX		401.00	-15.11	-1.55	446.00	-22.71	-1.84
K734WB		409.78	-6.33	-0.65	450.62	-18.09	-1.47
KG2CFN	X	436.60	20.49	2.11	508.60	39.89	3.24

		Sample S53			Sample S54		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
L63MY6		424.80	8.69	0.89	471.60	2.89	0.23
L6HXWC		424.42	8.31	0.85	467.02	-1.69	-0.14
LU7FD9		405.20	-10.91	-1.12	454.20	-14.51	-1.18
LZ8ZX4		399.20	-16.91	-1.74	461.40	-7.31	-0.59
MCFYPB		419.50	3.39	0.35	473.08	4.37	0.35
MENHU9		415.00	-1.11	-0.11	460.00	-8.71	-0.71
MHKBLH		401.98	-14.13	-1.45	453.80	-14.91	-1.21
MJFMY3		420.20	4.09	0.42	482.60	13.89	1.13
MR97LX		420.62	4.51	0.46	475.16	6.45	0.52
N8HW22		420.00	3.89	0.40	485.20	16.49	1.34
NLY3CB		418.36	2.25	0.23	473.16	4.45	0.36
PBFQGH		403.98	-12.13	-1.25	456.82	-11.89	-0.97
PJVCMZ		407.60	-8.51	-0.87	451.80	-16.91	-1.37
PKZGWN		413.26	-2.84	-0.29	456.90	-11.81	-0.96
PWXWXC		420.88	4.77	0.49	473.14	4.43	0.36
QF6GBR		427.40	11.29	1.16	483.80	15.09	1.23
QGLLZH		410.92	-5.19	-0.53	459.82	-8.89	-0.72
QNVQKV		421.60	5.49	0.56	468.60	-0.11	-0.01
QWCVE8		424.20	8.09	0.83	485.80	17.09	1.39
R4RPDA		409.28	-6.83	-0.70	452.26	-16.45	-1.34
R9L4UE		402.62	-13.49	-1.39	463.44	-5.27	-0.43
RBA393		417.60	1.49	0.15	472.20	3.49	0.28
RZPVBY		401.20	-14.91	-1.53	446.00	-22.71	-1.84
TW8LJM		417.60	1.49	0.15	464.40	-4.31	-0.35
UB29MU		424.40	8.29	0.85	487.80	19.09	1.55
UNPB7L		424.52	8.41	0.87	486.52	17.81	1.45
V9RAPW		415.20	-0.91	-0.09	458.00	-10.71	-0.87
V9TZVE		417.60	1.49	0.15	463.40	-5.31	-0.43
VCMG2M		421.14	5.03	0.52	484.18	15.47	1.26
VDF3JX		436.20	20.09	2.07	481.00	12.29	1.00
VDJUQ2		423.80	7.69	0.79	472.00	3.29	0.27
VEJCX3		396.94	-19.17	-1.97	450.68	-18.03	-1.46
VMMABD		431.20	15.09	1.55	497.40	28.69	2.33
W8RAWJ		404.20	-11.91	-1.22	461.20	-7.51	-0.61
WDGHPQ		410.40	-5.71	-0.59	470.20	1.49	0.12
WHCVC7	*	392.80	-23.31	-2.40	434.80	-33.91	-2.75
X2GDRA		422.40	6.29	0.65	471.00	2.29	0.19
XCED6E		421.60	5.49	0.56	474.60	5.89	0.48
XE8QYJ	*	440.54	24.43	2.51	487.42	18.71	1.52
YB62BV		417.80	1.69	0.17	465.20	-3.51	-0.29
YDUMTY		413.00	-3.11	-0.32	470.60	1.89	0.15
YUFU7V		417.60	1.49	0.15	458.40	-10.31	-0.84
YXYX4T		425.16	9.05	0.93	482.98	14.27	1.16
Z8WXMK		431.06	14.95	1.54	482.38	13.67	1.11
ZXH42X		424.60	8.49	0.87	491.40	22.69	1.84

Summary Statistics

	Sample S53		Sample S54	
Grand Means	416.11	HK 500 gf	468.71	HK 500 gf
Stnd Dev Btwn Labs	9.72	HK 500 gf	12.31	HK 500 gf

Samples S53, S54 : Steel, Steel

Statistics based on 87 of 92 reporting participants

Comments on Assigned Data Flags for Test #121

9U7RFA (X) - Inconsistent in testing between samples.

GJYKEG (X) - Data for sample S54 are high.

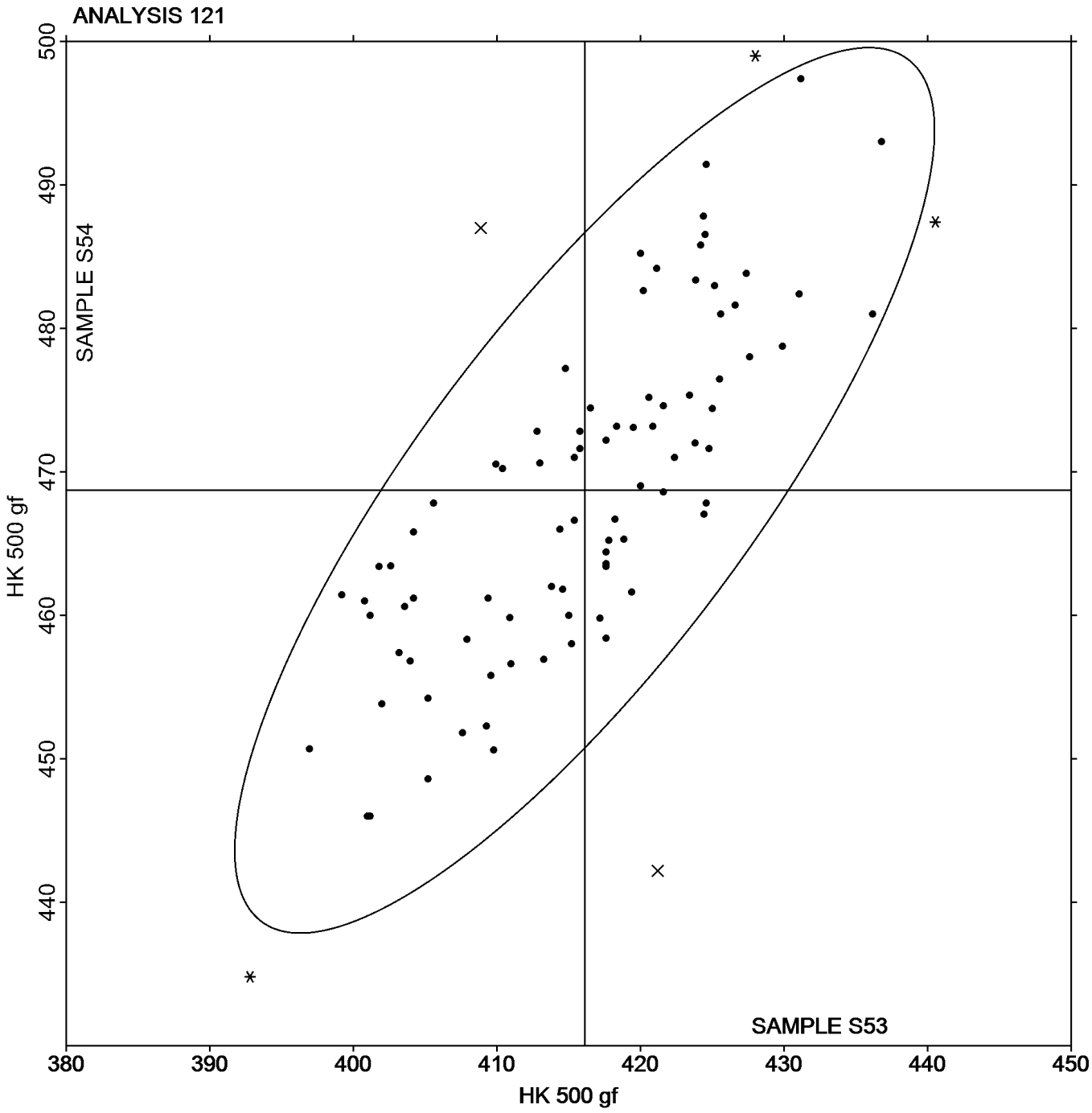
GQGAF3 (X) - Data for sample S54 are low.

H6BLLB (X) - Inconsistent in testing between samples.

KG2CFN (X) - Data for sample S54 are high. Inconsistent within the determinations of both samples.

SAMPLE S53
416.11 HK 500 gf

SAMPLE S54
468.71 HK 500 gf



		Sample S53			Sample S54		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
2C944R		418.60	-5.87	-0.48	465.40	-13.84	-0.91
4C4M7B		436.00	11.53	0.95	491.60	12.36	0.82
4KXVNG		439.26	14.79	1.21	494.72	15.48	1.02
4NZQCQ		434.40	9.93	0.81	487.20	7.96	0.53
67RBFN		411.60	-12.87	-1.06	469.20	-10.04	-0.66
6APHKR		425.60	1.13	0.09	485.40	6.16	0.41
6FYEP2		404.40	-20.07	-1.65	458.80	-20.44	-1.35
6UUCKB		431.60	7.13	0.58	485.20	5.96	0.39
74Y6J4		420.96	-3.51	-0.29	462.68	-16.56	-1.09
7MUX7N		424.20	-0.27	-0.02	478.40	-0.84	-0.06
8JA9H4		421.00	-3.47	-0.28	467.20	-12.04	-0.80
8MRJE9		420.00	-4.47	-0.37	475.40	-3.84	-0.25
8WVKUE		421.40	-3.07	-0.25	477.80	-1.44	-0.10
9U7RFA		421.60	-2.87	-0.24	482.00	2.76	0.18
AF3K26		438.40	13.93	1.14	493.20	13.96	0.92
CJCABH		428.76	4.29	0.35	500.86	21.62	1.43
DF9V64		432.00	7.53	0.62	485.60	6.36	0.42
DQ9CXG		415.60	-8.87	-0.73	467.00	-12.24	-0.81
DRNHGQ		426.66	2.19	0.18	478.77	-0.48	-0.03
DURWZJ		431.80	7.33	0.60	479.00	-0.24	-0.02
DWTHE9		423.20	-1.27	-0.10	477.00	-2.24	-0.15
EHVY8A		443.80	19.33	1.58	491.20	11.96	0.79
ERGDBM		407.40	-17.07	-1.40	461.60	-17.64	-1.17
ERWWW6		426.20	1.73	0.14	474.40	-4.84	-0.32
F83F7G		434.20	9.73	0.80	472.60	-6.64	-0.44
FLQW9L		421.08	-3.39	-0.28	468.30	-10.94	-0.72
FT98MM		421.60	-2.87	-0.24	470.08	-9.16	-0.61
GJYKEG	*	458.40	33.93	2.78	524.22	44.98	2.97
GMVD46		411.80	-12.67	-1.04	477.80	-1.44	-0.10
H6BLLB	*	411.98	-12.49	-1.02	487.62	8.38	0.55
KG2CFN		431.00	6.53	0.54	502.80	23.56	1.56
L63MY6		428.80	4.33	0.35	483.40	4.16	0.27
L6HXWC		433.10	8.63	0.71	490.74	11.50	0.76
LU7FD9		414.60	-9.87	-0.81	464.00	-15.24	-1.01
LZ8ZX4		410.80	-13.67	-1.12	462.20	-17.04	-1.13
MENHU9		425.80	1.33	0.11	474.00	-5.24	-0.35
MHKBLH		405.46	-19.01	-1.56	465.90	-13.34	-0.88
MJFMY3		422.40	-2.07	-0.17	481.20	1.96	0.13
MR97LX		434.74	10.27	0.84	489.06	9.82	0.65
N8HW22		420.40	-4.07	-0.33	481.40	2.16	0.14
NLY3CB		426.52	2.05	0.17	484.98	5.74	0.38
PBFQGH		405.02	-19.45	-1.60	461.42	-17.82	-1.18
PKZGWN		412.93	-11.54	-0.95	468.34	-10.90	-0.72
PWXWXC		416.90	-7.57	-0.62	471.22	-8.02	-0.53
QF6GBR		424.80	0.33	0.03	492.40	13.16	0.87
QNVQKV		430.20	5.73	0.47	486.40	7.16	0.47
QWCVE8		421.20	-3.27	-0.27	480.00	0.76	0.05

Fasteners and Metals Interlaboratory Testing Program

Analysis 122

Microhardness: Knoop Indenters (200 gf)
ASTM E384

Cycle 123
3rd Qtr 2018

		Sample S53			Sample S54		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
R4RPDA	*	412.84	-11.63	-0.95	446.02	-33.22	-2.20
RBA393		418.00	-6.47	-0.53	476.80	-2.44	-0.16
RZPVBY	*	407.40	-17.07	-1.40	438.60	-40.64	-2.69
TW8LJM		431.20	6.73	0.55	484.00	4.76	0.31
UB29MU	*	442.80	18.33	1.50	516.60	37.36	2.47
UNPB7L		426.56	2.09	0.17	491.78	12.54	0.83
V9RAPW		406.60	-17.87	-1.47	471.40	-7.84	-0.52
V9TZVE		428.00	3.53	0.29	484.20	4.96	0.33
VDF3JX		442.00	17.53	1.44	483.20	3.96	0.26
VDJUQ2		436.80	12.33	1.01	488.00	8.76	0.58
VEJCX3		401.50	-22.97	-1.88	458.44	-20.80	-1.37
VMMABD	X	399.60	-24.87	-2.04	496.40	17.16	1.13
WDGHPQ		429.80	5.33	0.44	480.60	1.36	0.09
WHCVC7	*	393.60	-30.87	-2.53	452.40	-26.84	-1.77
X2GDRA		436.40	11.93	0.98	475.80	-3.44	-0.23
XCED6E		430.20	5.73	0.47	486.00	6.76	0.45
XE8QYJ		447.10	22.63	1.86	507.78	28.54	1.89
YB62BV	X	477.00	52.53	4.31	505.40	26.16	1.73
YDUMTY		412.40	-12.07	-0.99	464.80	-14.44	-0.95
YXYX4T		437.22	12.75	1.05	489.94	10.70	0.71
Z8WXMK		429.68	5.21	0.43	479.66	0.42	0.03
ZXH42X		441.40	16.93	1.39	503.60	24.36	1.61

Summary Statistics

	Sample S53		Sample S54	
Grand Means	424.47	HK 200 gf	479.24	HK 200 gf
Stnd Dev Btwn Labs	12.19	HK 200 gf	15.13	HK 200 gf

Samples S53, S54 : Steel, Steel

Statistics based on 67 of 69 reporting participants

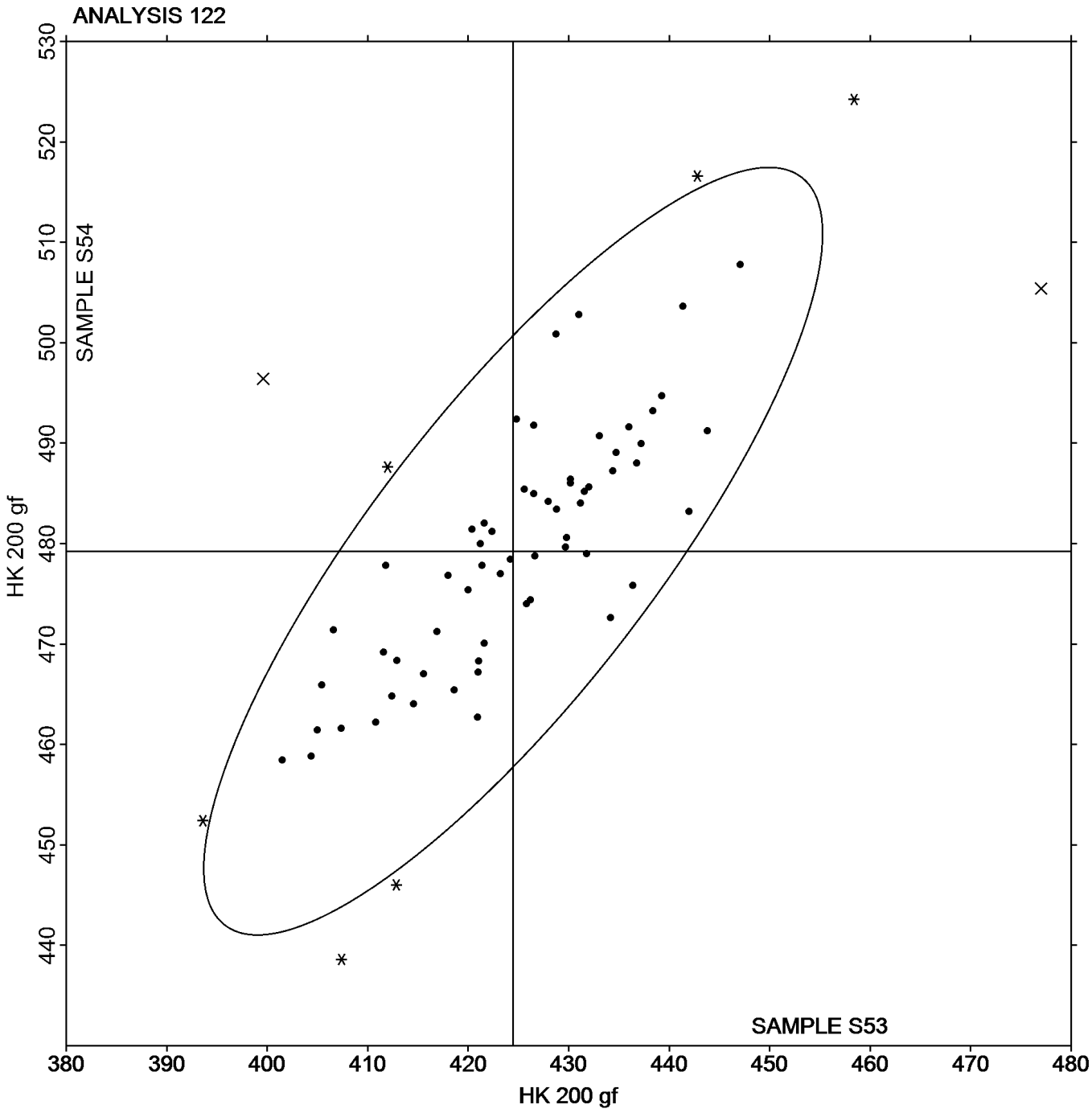
Comments on Assigned Data Flags for Test #122

VMMABD (X) - Inconsistent in testing between samples.

YB62BV (X) - Data for sample S53 are high.

SAMPLE S53
424.47 HK 200 gf

SAMPLE S54
479.24 HK 200 gf



		Sample S53			Sample S54		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
2BBT64		394.60	-0.33	-0.04	447.80	-3.13	-0.29
2C944R		377.80	-17.13	-2.09	434.20	-16.73	-1.57
2G23HM		397.88	2.95	0.36	465.92	14.99	1.40
2NZULB		391.20	-3.73	-0.45	444.00	-6.93	-0.65
34ATCT		410.78	15.85	1.93	461.96	11.03	1.03
38CUEB		395.60	0.67	0.08	454.80	3.87	0.36
3RZH6W		413.40	18.47	2.25	465.20	14.27	1.34
3X3UWM	X	391.18	-3.75	-0.46	412.18	-38.75	-3.63
49XXFG		379.40	-15.53	-1.89	432.00	-18.93	-1.77
4C4M7B		389.80	-5.13	-0.62	457.40	6.47	0.61
4KG89G		390.00	-4.93	-0.60	444.80	-6.13	-0.57
4NZQCQ		399.20	4.27	0.52	454.60	3.67	0.34
4QGQ9R		388.92	-6.01	-0.73	447.70	-3.23	-0.30
67RBFN		382.80	-12.13	-1.48	438.20	-12.73	-1.19
6APHKR		392.40	-2.53	-0.31	458.40	7.47	0.70
6FYEP2		381.20	-13.73	-1.67	433.80	-17.13	-1.60
6UUCKB		397.00	2.07	0.25	449.20	-1.73	-0.16
74Y6J4	X	373.72	-21.21	-2.58	446.38	-4.55	-0.43
77U9EQ		393.80	-1.13	-0.14	450.40	-0.53	-0.05
7MUX7N		388.20	-6.73	-0.82	446.80	-4.13	-0.39
7ZK8XT		385.16	-9.77	-1.19	447.86	-3.07	-0.29
8MRJE9		391.20	-3.73	-0.45	445.60	-5.33	-0.50
8WVKUE		392.20	-2.73	-0.33	455.00	4.07	0.38
97HJ3N		393.80	-1.13	-0.14	449.00	-1.93	-0.18
9D6AQ6		384.00	-10.93	-1.33	432.60	-18.33	-1.72
9U7RFA		386.60	-8.33	-1.01	442.20	-8.73	-0.82
AF3K26	X	423.60	28.67	3.49	471.00	20.07	1.88
AQZN4D		396.80	1.87	0.23	446.80	-4.13	-0.39
B77RT3		387.40	-7.53	-0.92	450.20	-0.73	-0.07
B8Z3T7		398.00	3.07	0.37	459.00	8.07	0.76
BDQC46		396.76	1.83	0.22	460.02	9.09	0.85
BENM2T		395.60	0.67	0.08	452.80	1.87	0.17
C2TVTU	X	452.80	57.87	7.04	396.80	-54.13	-5.06
C6GMAW		397.36	2.43	0.30	461.22	10.29	0.96
CJCABH		400.62	5.69	0.69	453.60	2.67	0.25
CMB6R7		393.80	-1.13	-0.14	454.60	3.67	0.34
CUGAVH		406.01	11.08	1.35	456.50	5.57	0.52
D2P7X2		393.20	-1.73	-0.21	445.00	-5.93	-0.55
DF9V64		405.20	10.27	1.25	461.00	10.07	0.94
DJ86DK		402.52	7.59	0.92	457.16	6.23	0.58
DQ9CXG		397.40	2.47	0.30	450.40	-0.53	-0.05
DRNHGQ		393.25	-1.67	-0.20	454.10	3.17	0.30
DWTHE9		383.80	-11.13	-1.35	431.80	-19.13	-1.79
EHVY8A		404.80	9.87	1.20	462.00	11.07	1.04
EJZFB8		391.40	-3.53	-0.43	445.80	-5.13	-0.48
ERGDBM		389.60	-5.33	-0.65	435.60	-15.33	-1.43
ERWWW6		386.00	-8.93	-1.09	445.40	-5.53	-0.52

		Sample S53			Sample S54		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
F3WCDM		410.18	15.25	1.86	472.30	21.37	2.00
F83F7G		394.80	-0.13	-0.02	451.00	0.07	0.01
F9FJU7		398.12	3.19	0.39	461.56	10.63	0.99
FHLV9J		406.80	11.87	1.45	469.40	18.47	1.73
FLQW9L		394.18	-0.75	-0.09	456.70	5.77	0.54
FQF3RN		394.60	-0.33	-0.04	439.20	-11.73	-1.10
FT98MM	*	409.36	14.43	1.76	448.90	-2.03	-0.19
GJYKEG		413.40	18.47	2.25	464.40	13.47	1.26
GKL4LX		402.00	7.07	0.86	446.00	-4.93	-0.46
GMVD46	X	390.40	-4.53	-0.55	404.20	-46.73	-4.37
GN7C3K		384.60	-10.33	-1.26	434.40	-16.53	-1.55
GT7WDC		402.42	7.49	0.91	456.42	5.49	0.51
GUEQTW		401.80	6.87	0.84	444.40	-6.53	-0.61
H6BLLB		400.76	5.83	0.71	463.78	12.85	1.20
JHDJRA		398.00	3.07	0.37	441.40	-9.53	-0.89
JTDKFU		381.80	-13.13	-1.60	449.20	-1.73	-0.16
K734WB	X	389.80	-5.13	-0.62	479.80	28.87	2.70
KG2CFN		396.00	1.07	0.13	448.60	-2.33	-0.22
KG2CH9		388.06	-6.87	-0.84	448.08	-2.85	-0.27
KHCW9N		398.44	3.51	0.43	437.55	-13.38	-1.25
KHDTED		379.60	-15.33	-1.87	444.32	-6.61	-0.62
L63MY6		402.78	7.85	0.96	460.54	9.61	0.90
L6HXWC	*	402.14	7.21	0.88	438.90	-12.03	-1.13
L943QB		387.60	-7.33	-0.89	437.20	-13.73	-1.28
LMMAN2		393.64	-1.29	-0.16	438.94	-11.99	-1.12
LNRGLU		390.56	-4.37	-0.53	453.58	2.65	0.25
LREEG7		414.20	19.27	2.35	469.52	18.59	1.74
LRXCLQ		388.86	-6.07	-0.74	455.08	4.15	0.39
LU7FD9		390.40	-4.53	-0.55	441.40	-9.53	-0.89
LZ8ZX4		391.40	-3.53	-0.43	452.00	1.07	0.10
LZBDRR		397.17	2.24	0.27	456.63	5.70	0.53
MENHU9		397.60	2.67	0.33	448.60	-2.33	-0.22
MJFMY3		400.40	5.47	0.67	461.60	10.67	1.00
MKTTU7		392.80	-2.13	-0.26	455.60	4.67	0.44
MR97LX		388.58	-6.35	-0.77	438.94	-11.99	-1.12
N7AKJY		394.48	-0.45	-0.05	464.68	13.75	1.29
N8HW22		394.00	-0.93	-0.11	461.20	10.27	0.96
N8ZJDX		385.56	-9.37	-1.14	435.76	-15.17	-1.42
NA48WU		398.60	3.67	0.45	463.40	12.47	1.17
NK9YNA		399.60	4.67	0.57	459.60	8.67	0.81
NLY3CB		397.76	2.83	0.34	451.62	0.69	0.06
PKZGWN		385.40	-9.53	-1.16	440.60	-10.33	-0.97
PPVBWB		389.44	-5.49	-0.67	449.52	-1.41	-0.13
PWXWXC		395.10	0.17	0.02	440.00	-10.93	-1.02
Q8CYJB	X	430.98	36.05	4.39	492.44	41.51	3.88
Q9LD34		403.80	8.87	1.08	452.98	2.05	0.19
QBVP8U		397.20	2.27	0.28	455.80	4.87	0.46

		Sample S53			Sample S54		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
QF6GBR		394.20	-0.73	-0.09	436.40	-14.53	-1.36
QGLLZH		390.44	-4.49	-0.55	432.82	-18.11	-1.69
QN283U		391.74	-3.19	-0.39	461.80	10.87	1.02
QNVQKV		399.20	4.27	0.52	453.40	2.47	0.23
QTA9YR		402.80	7.87	0.96	465.20	14.27	1.34
QU4G82		389.40	-5.53	-0.67	430.81	-20.12	-1.88
QWCVE8		403.60	8.67	1.06	458.60	7.67	0.72
R4PFD8		398.00	3.07	0.37	436.20	-14.73	-1.38
R9L4UE		386.24	-8.69	-1.06	444.06	-6.87	-0.64
RBA393		397.80	2.87	0.35	457.00	6.07	0.57
RH6AHV		396.20	1.27	0.15	450.60	-0.33	-0.03
RZPVBY		386.80	-8.13	-0.99	434.40	-16.53	-1.55
TK9CW4		409.20	14.27	1.74	466.20	15.27	1.43
TNRM8W		405.60	10.67	1.30	470.00	19.07	1.78
TW8LJM		396.60	1.67	0.20	447.80	-3.13	-0.29
U2D4DY		402.00	7.07	0.86	465.60	14.67	1.37
UATHKB		388.28	-6.65	-0.81	460.04	9.11	0.85
UB29MU		402.60	7.67	0.93	469.80	18.87	1.77
UBH6XX		377.00	-17.93	-2.18	426.60	-24.33	-2.28
UC9VRL		398.80	3.87	0.47	455.40	4.47	0.42
UE27WQ		405.43	10.50	1.28	467.19	16.26	1.52
V4V469		376.34	-18.59	-2.26	435.74	-15.19	-1.42
V9RAPW		390.20	-4.73	-0.58	448.00	-2.93	-0.27
V9TZVE		392.00	-2.93	-0.36	442.40	-8.53	-0.80
VCMG2M		393.74	-1.19	-0.14	443.08	-7.85	-0.73
VDF3JX	*	414.80	19.87	2.42	476.40	25.47	2.38
VDJUQ2		396.60	1.67	0.20	446.20	-4.73	-0.44
VEJCX3		386.48	-8.45	-1.03	436.06	-14.87	-1.39
VMMABD		394.80	-0.13	-0.02	447.00	-3.93	-0.37
VNJHPP	*	377.80	-17.13	-2.09	445.80	-5.13	-0.48
W8RAWJ	*	379.60	-15.33	-1.87	450.80	-0.13	-0.01
WDGHPQ		387.20	-7.73	-0.94	437.40	-13.53	-1.27
X2GDRA		393.80	-1.13	-0.14	453.20	2.27	0.21
X6JU94		389.18	-5.75	-0.70	440.54	-10.39	-0.97
XCED6E		398.20	3.27	0.40	458.00	7.07	0.66
XE8QYJ		404.96	10.03	1.22	460.92	9.99	0.93
XTPDJ3		402.52	7.59	0.92	455.64	4.71	0.44
XXHGBL		408.00	13.07	1.59	472.20	21.27	1.99
YB62BV		406.00	11.07	1.35	455.80	4.87	0.46
YDUMTY		387.80	-7.13	-0.87	451.40	0.47	0.04
YUFU7V		394.20	-0.73	-0.09	444.00	-6.93	-0.65
YUH43W		386.20	-8.73	-1.06	438.60	-12.33	-1.15
YXYX4T		401.78	6.85	0.83	454.42	3.49	0.33
Z69U7T		397.40	2.47	0.30	457.20	6.27	0.59
Z6BUFN		403.56	8.63	1.05	466.58	15.65	1.46
Z7746P		385.80	-9.13	-1.11	444.80	-6.13	-0.57
ZD4CPP		396.58	1.66	0.20	450.74	-0.19	-0.02

		Sample S53			Sample S54		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
ZXH42X		397.40	2.47	0.30	469.00	18.07	1.69

Summary Statistics

	Sample S53		Sample S54	
Grand Means	394.93	HV 500 gf	450.93	HV 500 gf
Stnd Dev Btwn Labs	8.21	HV 500 gf	10.69	HV 500 gf

Samples S53, S54 : Steel, Steel

Statistics based on 135 of 142 reporting participants

Comments on Assigned Data Flags for Test #123

3X3UWM (X) - Data for sample S54 are low. Inconsistent within the determinations of sample S53.

74Y6J4 (X) - Inconsistent in testing between samples.

AF3K26 (X) - Data for sample S53 are high.

C2TVTU (X) - Data appear to be transposed between samples.

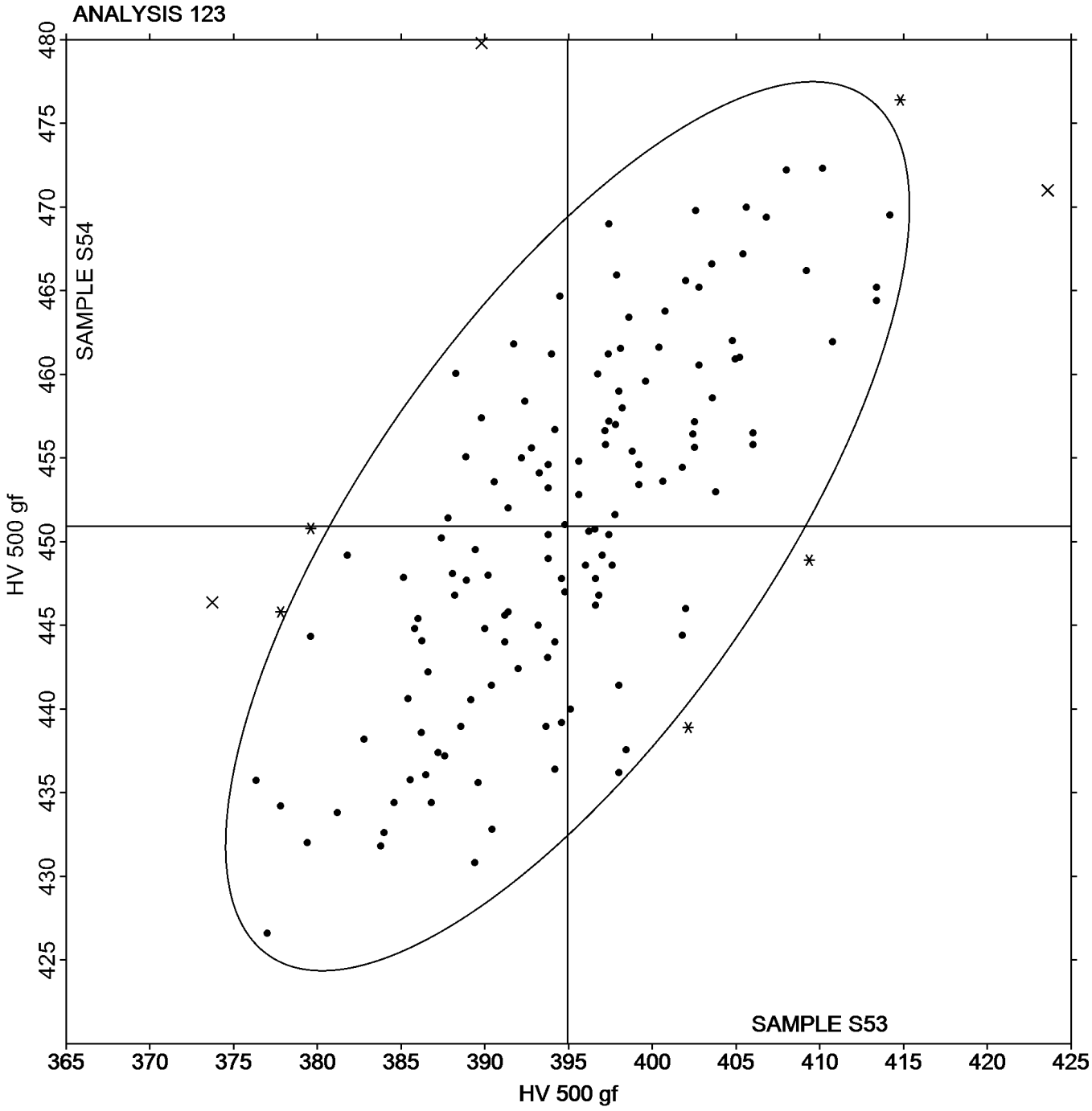
GMVD46 (X) - Data for sample S54 are low.

K734WB (X) - Inconsistent in testing between samples.

Q8CYJB (X) - Data for both samples are high.

SAMPLE S53
394.93 HV 500 gf

SAMPLE S54
450.93 HV 500 gf



		Sample D53			Sample D54		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
2CWLBD		298.40	4.32	0.62	346.60	11.76	1.59
2F6C8R		298.40	4.32	0.62	342.20	7.36	0.99
2GL88T	X	302.80	8.72	1.25	356.40	21.56	2.91
2N6NAG		293.00	-1.08	-0.15	335.00	0.16	0.02
2NZULB	*	273.20	-20.88	-2.99	314.60	-20.24	-2.73
3VK6GQ		282.60	-11.48	-1.64	323.40	-11.44	-1.54
3VYJWM	*	302.00	7.92	1.13	352.00	17.16	2.32
3XYF3Y	X	268.20	-25.88	-3.71	298.00	-36.84	-4.97
3ZB24L		293.20	-0.88	-0.13	336.20	1.36	0.18
462A4G		295.40	1.32	0.19	333.40	-1.44	-0.19
49XXFG	X	266.20	-27.88	-3.99	313.40	-21.44	-2.89
4FFBEF		302.00	7.92	1.13	341.00	6.16	0.83
4GDQLL		298.80	4.72	0.68	342.20	7.36	0.99
4NZQCQ		299.12	5.04	0.72	338.40	3.56	0.48
6APHKR		295.40	1.32	0.19	338.60	3.76	0.51
6FYEP2		293.00	-1.08	-0.15	341.00	6.16	0.83
77NYHJ		302.80	8.72	1.25	346.60	11.76	1.59
77U9EQ		280.00	-14.08	-2.02	325.00	-9.84	-1.33
7MUX7N	X	265.00	-29.08	-4.16	306.60	-28.24	-3.81
88CYQE		297.80	3.72	0.53	341.40	6.56	0.89
8VMVTF		285.20	-8.88	-1.27	321.00	-13.84	-1.87
8WVKUE		295.20	1.12	0.16	334.00	-0.84	-0.11
97HJ3N		289.30	-4.78	-0.68	325.20	-9.64	-1.30
9DWZD6		298.40	4.32	0.62	341.00	6.16	0.83
9U7RFA		302.00	7.92	1.13	341.00	6.16	0.83
9X3ZKA		300.20	6.12	0.88	341.00	6.16	0.83
9YFE9J		302.20	8.12	1.16	341.00	6.16	0.83
ABR4JU	*	299.00	4.92	0.71	328.60	-6.24	-0.84
AF3K26		299.80	5.72	0.82	341.00	6.16	0.83
BB3Z4Y	*	277.80	-16.28	-2.33	316.20	-18.64	-2.52
BGPQTF		293.00	-1.08	-0.15	341.00	6.16	0.83
BJTJKT		293.00	-1.08	-0.15	331.00	-3.84	-0.52
BP4EP3		289.80	-4.28	-0.61	330.60	-4.24	-0.57
CDBT3X		290.80	-3.28	-0.47	335.20	0.36	0.05
DF9V64		293.80	-0.28	-0.04	334.60	-0.24	-0.03
DNHCNX	*	277.00	-17.08	-2.44	323.00	-11.84	-1.60
DQ9CXG		302.00	7.92	1.13	341.00	6.16	0.83
EV3LRF		285.00	-9.08	-1.30	331.00	-3.84	-0.52
F3BMA7		291.40	-2.68	-0.38	332.40	-2.44	-0.33
F9FJU7	*	284.40	-9.68	-1.39	317.40	-17.44	-2.35
FKCHR6		282.80	-11.28	-1.61	326.00	-8.84	-1.19
FYFP7A		293.20	-0.88	-0.13	330.50	-4.34	-0.59
GCGP9C		293.20	-0.88	-0.13	333.80	-1.04	-0.14
GKL4LX		291.60	-2.48	-0.35	325.80	-9.04	-1.22
GN7C3K		304.60	10.52	1.51	347.20	12.36	1.67
GRBXWC		296.40	2.32	0.33	341.00	6.16	0.83
HMVRUB		286.40	-7.68	-1.10	331.00	-3.84	-0.52

		Sample D53			Sample D54		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
JHDJRA		302.00	7.92	1.13	341.00	6.16	0.83
JJA6WG		301.40	7.32	1.05	339.80	4.96	0.67
K734WB	*	299.20	5.12	0.73	329.20	-5.64	-0.76
K7JNPV	*	288.40	-5.68	-0.81	341.00	6.16	0.83
K9AGMP		296.00	1.92	0.28	334.40	-0.44	-0.06
KTTJGP		285.00	-9.08	-1.30	333.00	-1.84	-0.25
LNRGLU		289.60	-4.48	-0.64	328.80	-6.04	-0.81
LVGCUJ		294.60	0.52	0.08	331.40	-3.44	-0.46
LZ8ZX4		297.20	3.12	0.45	337.20	2.36	0.32
MENHU9		291.40	-2.68	-0.38	333.00	-1.84	-0.25
MGF3NP		298.20	4.12	0.59	343.00	8.16	1.10
MJFMY3		280.80	-13.28	-1.90	326.20	-8.64	-1.17
MVBRB9		300.00	5.92	0.85	337.40	2.56	0.35
NBJCT8		302.00	7.92	1.13	341.00	6.16	0.83
P3Z2PW		296.60	2.52	0.36	335.20	0.36	0.05
Q3U7JV		303.40	9.32	1.34	348.00	13.16	1.78
QF6GBR		302.00	7.92	1.13	341.00	6.16	0.83
QLQZF2		299.60	5.52	0.79	337.00	2.16	0.29
QNVQKV		283.00	-11.08	-1.59	330.60	-4.24	-0.57
R2NUQZ		284.20	-9.88	-1.41	325.80	-9.04	-1.22
RU2L4V		290.80	-3.28	-0.47	332.60	-2.24	-0.30
RVXL2Z		302.00	7.92	1.13	341.00	6.16	0.83
RYHF38		294.20	0.12	0.02	331.60	-3.24	-0.44
TW2NHP		292.69	-1.39	-0.20	330.40	-4.43	-0.60
U3PGTP		302.00	7.92	1.13	341.00	6.16	0.83
UA6Y9H		296.60	2.52	0.36	335.00	0.16	0.02
UB29MU		300.20	6.12	0.88	337.20	2.36	0.32
UTKNQF		295.00	0.92	0.13	336.80	1.96	0.26
V4AMN7		297.20	3.12	0.45	335.40	0.56	0.08
V4EANX		292.80	-1.28	-0.18	332.80	-2.04	-0.27
V6RW9X		301.20	7.12	1.02	339.40	4.56	0.62
V9TZVE		293.00	-1.08	-0.15	334.80	-0.04	-0.01
VDJUQ2		290.00	-4.08	-0.58	331.00	-3.84	-0.52
VJT7PM		302.40	8.32	1.19	341.00	6.16	0.83
WDGHPQ		292.40	-1.68	-0.24	333.20	-1.64	-0.22
WWUVYX		304.10	10.02	1.44	346.90	12.06	1.63
X7D3B3		296.40	2.32	0.33	335.40	0.56	0.08
XE8QYJ		294.20	0.12	0.02	336.40	1.56	0.21
XXHGBL		294.40	0.32	0.05	332.20	-2.64	-0.36
YMHDFQ		285.00	-9.08	-1.30	321.00	-13.84	-1.87
YUH43W		291.80	-2.28	-0.33	325.80	-9.04	-1.22
Z69U7T		290.80	-3.28	-0.47	336.20	1.36	0.18

Summary Statistics

	Sample D53		Sample D54	
Grand Means	294.08	HBW	334.84	HBW
Stnd Dev Btwn Labs	6.98	HBW	7.41	HBW

Samples D53, D54 : Steel, Steel

Statistics based on 85 of 89 reporting participants

Samples D53, D54 are hardness test blocks made from steel. The blocks are heat treated to hardness levels specified by CTS.

Comments on Assigned Data Flags for Test #135

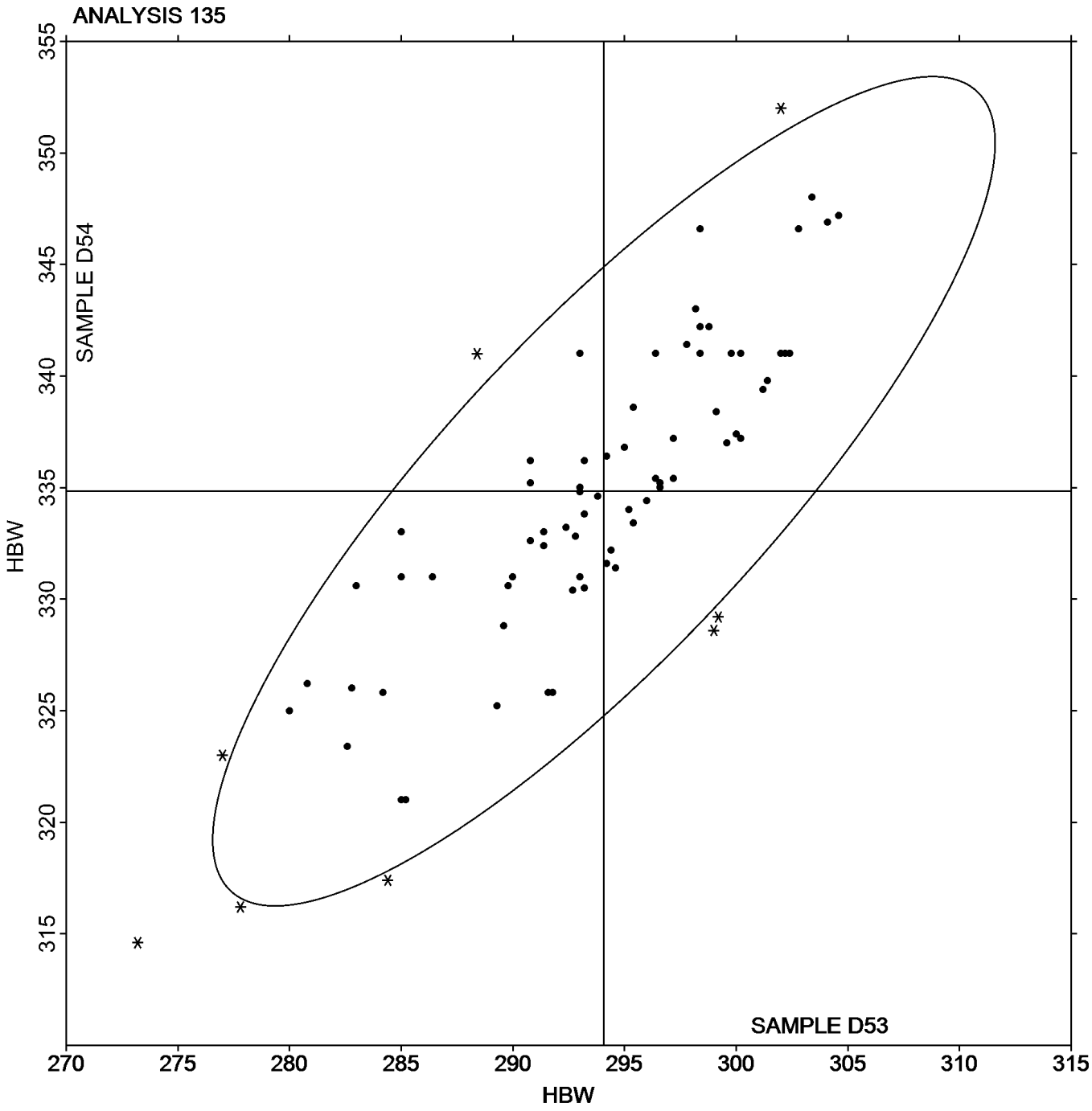
2GL88T (X) - Data for sample D54 are high. Inconsistent within the determinations of sample D54.

3XYF3Y (X) - Data for both samples are low. Possible Systematic Error.

49XXFG (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of both samples.

7MUX7N (X) - Data for both samples are low. Possible Systematic Error.

SAMPLE D53	SAMPLE D54
294.08 HBW	334.84 HBW



		Sample P53			Sample P54		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
28BJY9		144.20	1.58	1.41	146.90	3.55	2.16
2CWLBD		143.17	0.55	0.49	142.75	-0.60	-0.37
2GL88T	X	146.40	3.78	3.37	146.90	3.55	2.16
2NZULB	*	141.30	-1.32	-1.17	146.30	2.95	1.79
3RZH6W		141.10	-1.52	-1.35	143.40	0.05	0.03
3TDCMH		143.40	0.78	0.70	142.70	-0.65	-0.40
3VK6GQ		143.90	1.28	1.14	143.90	0.55	0.33
3VYJWM		143.07	0.46	0.41	144.03	0.68	0.41
3ZB24L		142.60	-0.02	-0.01	144.21	0.86	0.52
49XXFG		141.12	-1.49	-1.33	143.73	0.38	0.23
4FFBEF		143.90	1.28	1.14	143.40	0.05	0.03
4GCN4U		142.00	-0.62	-0.55	145.00	1.65	1.00
4GDQLL	M	142.98	0.36	0.32	No Data Reported		
4GFTM3	M	142.00	-0.62	-0.55	No Data Reported		
66E8RX		141.60	-1.02	-0.90	144.40	1.05	0.64
6A94E4		143.80	1.18	1.05	145.70	2.35	1.43
6APHKR		142.10	-0.52	-0.46	145.40	2.05	1.24
77NYHJ		144.48	1.87	1.66	144.71	1.36	0.83
782JBU		143.00	0.38	0.34	143.00	-0.35	-0.21
86RXXD		143.50	0.88	0.79	142.70	-0.65	-0.40
8VMVTF		142.86	0.25	0.22	142.86	-0.49	-0.30
8WVKUE		144.30	1.68	1.50	147.20	3.85	2.34
94FNBL		144.10	1.48	1.32	144.20	0.85	0.52
9DWZD6		140.70	-1.92	-1.70	141.00	-2.35	-1.43
9HUNFC		142.80	0.18	0.16	142.30	-1.05	-0.64
9U7RFA		141.53	-1.09	-0.97	142.33	-1.03	-0.62
A49VZ4		144.52	1.90	1.69	144.81	1.46	0.89
A9F2BB		143.30	0.68	0.61	146.70	3.35	2.03
AF3K26		141.85	-0.77	-0.68	141.56	-1.79	-1.09
B8Z3T7		142.10	-0.52	-0.46	143.50	0.15	0.09
BB3Z4Y		143.15	0.54	0.48	146.34	2.99	1.82
BP4EP3		142.66	0.04	0.04	145.48	2.13	1.29
CDBT3X		142.10	-0.52	-0.46	141.30	-2.05	-1.25
CQWPXB		143.92	1.31	1.16	146.17	2.82	1.71
CTMCPJ		142.40	-0.22	-0.19	142.00	-1.35	-0.82
D76JAA		144.00	1.38	1.23	144.00	0.65	0.39
DDPNZP		141.77	-0.85	-0.75	142.33	-1.02	-0.62
DF9V64		142.20	-0.42	-0.37	141.40	-1.95	-1.19
DLEF4A		142.05	-0.57	-0.50	142.49	-0.87	-0.53
DQ9CXG		143.00	0.38	0.34	142.00	-1.35	-0.82
DRNHGQ	X	153.74	11.12	9.89	150.84	7.49	4.55
EJZFB8		140.69	-1.93	-1.72	140.54	-2.81	-1.71
EV3LRF		143.30	0.68	0.61	142.70	-0.65	-0.40
FDD3V6	*	144.91	2.29	2.04	148.01	4.66	2.83
FKCHR6		144.14	1.52	1.35	144.76	1.41	0.86
FZNE88		143.66	1.04	0.93	146.01	2.66	1.62
GCGP9C		143.47	0.85	0.76	143.80	0.45	0.27

		Sample P53			Sample P54		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
GCHG6Y		141.41	-1.20	-1.07	142.28	-1.07	-0.65
GN7C3K		141.46	-1.16	-1.03	144.31	0.96	0.58
GQXV4C		142.42	-0.20	-0.17	142.49	-0.86	-0.52
GX9BJY		141.69	-0.93	-0.83	141.99	-1.36	-0.83
HLXGVM		141.90	-0.72	-0.64	145.30	1.95	1.18
HMVRUB		143.20	0.58	0.52	146.10	2.75	1.67
J4WGND		143.83	1.21	1.08	142.72	-0.63	-0.38
JHBTQ7		144.40	1.78	1.59	144.80	1.45	0.88
JHDJRA		142.60	-0.02	-0.01	142.90	-0.45	-0.27
JRJE4Z		142.70	0.08	0.07	142.10	-1.25	-0.76
K7JNPV	X	137.08	-5.54	-4.92	137.28	-6.07	-3.69
KTTJGP	*	144.80	2.18	1.94	141.80	-1.55	-0.94
LGGHCH		141.85	-0.77	-0.68	142.57	-0.78	-0.47
LTBR7J		142.80	0.18	0.16	141.10	-2.25	-1.37
LVGCUJ		142.50	-0.12	-0.10	141.80	-1.55	-0.94
LZ8ZX4		141.23	-1.38	-1.23	141.56	-1.79	-1.09
M9XRAN	X	138.60	-4.02	-3.57	129.70	-13.65	-8.30
MDRVWZ		141.12	-1.49	-1.33	141.85	-1.50	-0.91
MENHU9		142.14	-0.48	-0.42	142.59	-0.76	-0.46
MGF3NP		142.57	-0.04	-0.04	141.85	-1.50	-0.91
MKTTU7		141.80	-0.82	-0.73	141.60	-1.75	-1.07
MYBBF3		141.50	-1.12	-0.99	143.30	-0.05	-0.03
N8HW22		143.30	0.68	0.61	142.70	-0.65	-0.40
NLY3CB		141.85	-0.77	-0.68	145.33	1.98	1.20
NWGDFZ		140.83	-1.78	-1.59	140.83	-2.52	-1.53
PBF9C2		141.24	-1.38	-1.23	144.50	1.15	0.70
PPXJ8A		142.57	-0.04	-0.04	142.72	-0.63	-0.39
PX72DL		140.36	-2.26	-2.01	141.37	-1.98	-1.20
QF6GBR		142.10	-0.52	-0.46	142.50	-0.85	-0.52
QLQZF2		142.86	0.25	0.22	141.99	-1.36	-0.83
QN283U		141.32	-1.30	-1.15	143.10	-0.25	-0.15
QU7LN6		141.90	-0.72	-0.64	144.10	0.75	0.45
R2NUQZ		141.90	-0.72	-0.64	143.70	0.35	0.21
R7UPAZ		141.40	-1.22	-1.08	142.30	-1.05	-0.64
R9KR74	X	147.00	4.38	3.90	144.60	1.25	0.76
RER9L4		143.30	0.68	0.61	143.15	-0.20	-0.12
RKE834		143.90	1.28	1.14	142.78	-0.57	-0.35
RU2L4V		143.01	0.39	0.35	145.04	1.69	1.03
RVXL2Z		143.00	0.38	0.34	142.00	-1.35	-0.82
RXYU7B		144.10	1.48	1.32	144.70	1.35	0.82
T3QETQ		142.90	0.28	0.25	142.10	-1.25	-0.76
TK9CW4		144.09	1.47	1.31	141.72	-1.63	-0.99
U3PGTP		141.10	-1.52	-1.35	144.00	0.65	0.39
UA6Y9H		141.60	-1.02	-0.90	144.60	1.25	0.76
UB29MU		141.30	-1.32	-1.17	141.90	-1.45	-0.88
UTKNQF		141.34	-1.28	-1.14	141.15	-2.20	-1.34
V4EANX		142.23	-0.38	-0.34	141.91	-1.44	-0.87

WebCode	Data Flag	Sample P53 Lab Mean	Sample P53 Diff. from Grand Mean	Sample P53 CPV	Sample P54 Lab Mean	Sample P54 Diff. from Grand Mean	Sample P54 CPV
V9TZVE		144.10	1.48	1.32	140.80	-2.55	-1.55
VGMA4N		142.80	0.18	0.16	142.40	-0.95	-0.58
VWFDMM		142.00	-0.62	-0.55	143.00	-0.35	-0.21
VWWEM4		144.59	1.98	1.76	141.59	-1.76	-1.07
W2MQ3Q		143.43	0.81	0.72	142.56	-0.79	-0.48
WXMW6W		141.17	-1.44	-1.29	145.40	2.05	1.25
X6GNLN		143.68	1.06	0.94	145.55	2.19	1.33
X7D3B3	X	149.00	6.38	5.68	147.00	3.65	2.22
XDDCNM		142.50	-0.12	-0.10	143.90	0.55	0.33
XXGUP2		143.85	1.23	1.10	143.28	-0.07	-0.05
Y43ZVM		140.54	-2.07	-1.84	143.44	0.09	0.06
YMHDFQ	X	146.80	4.18	3.72	145.00	1.65	1.00

Summary Statistics

	Sample P53		Sample P54	
Grand Means	142.62	ksi	143.35	ksi
Stnd Dev Btwn Labs	1.12	ksi	1.65	ksi

Samples P53, P54 : AISI 4340 (E), AISI 4340 (F)

Statistics based on 97 of 106 reporting participants

Comments on Assigned Data Flags for Test #140

2GL88T (X) - Data for sample P53 are high.

4GDQLL (M) - Participant did not submit data for sample P54.

4GFTM3 (M) - Participant did not submit data for sample P54.

DRNHGQ (X) - Data for both samples are high.

K7JNPV (X) - Data for both samples are low.

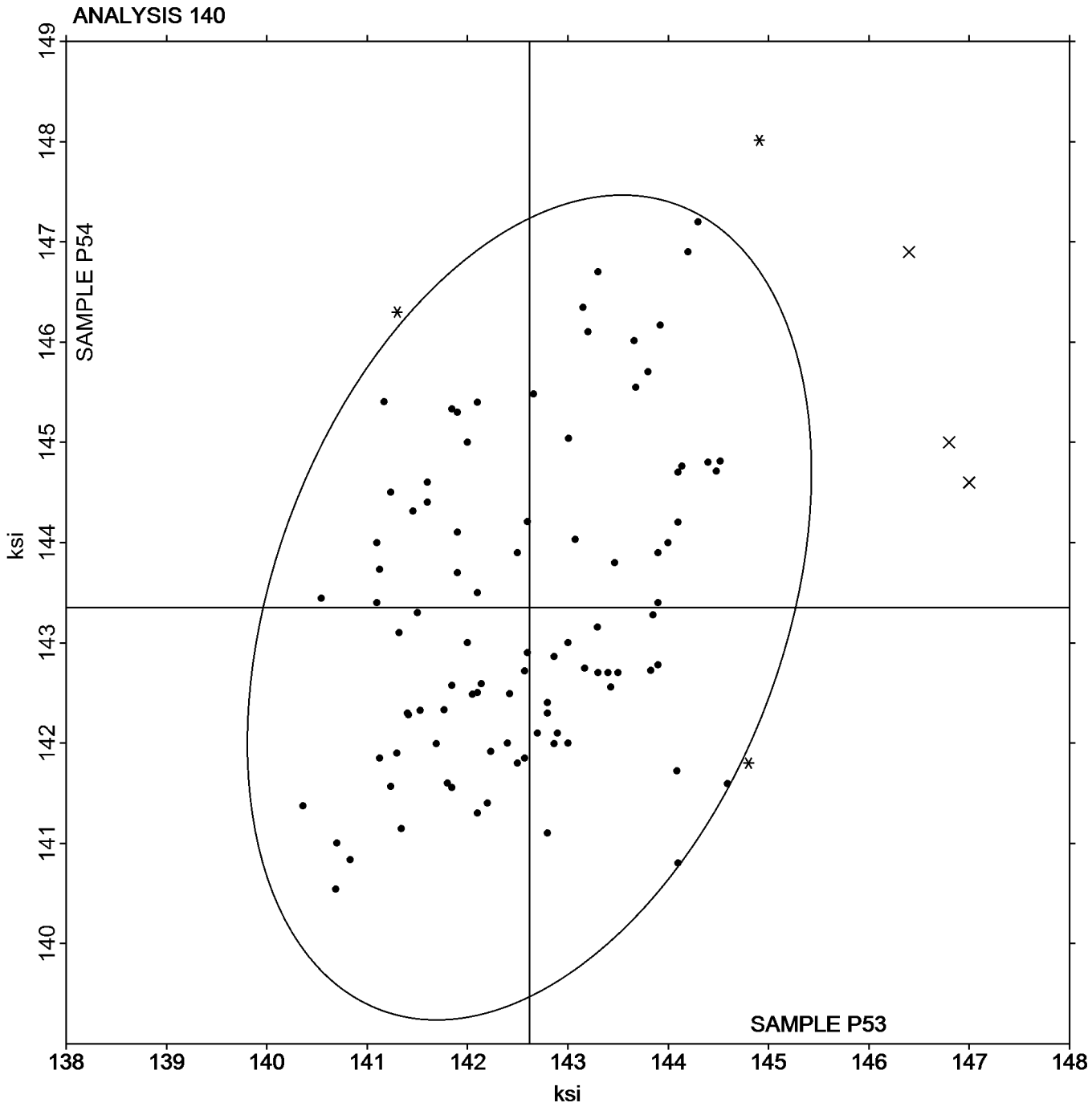
M9XRAN (X) - Data for both samples are low.

R9KR74 (X) - Data for sample P53 are high.

X7D3B3 (X) - Data for sample P53 are high.

YMHDFQ (X) - Data for sample P53 are high.

SAMPLE P53	SAMPLE P54
142.62 ksi	143.35 ksi



		Sample P53			Sample P54		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
28BJY9	*	117.90	2.74	2.33	119.90	4.80	2.74
2CWLBD		115.09	-0.07	-0.06	113.22	-1.89	-1.08
2GL88T		114.00	-1.16	-0.98	113.00	-2.10	-1.20
2NZULB		115.60	0.44	0.38	118.30	3.20	1.82
3RZH6W		114.30	-0.86	-0.73	115.60	0.50	0.28
3TDCMH		115.90	0.74	0.63	114.50	-0.60	-0.34
3VK6GQ		116.17	1.01	0.86	115.74	0.64	0.36
3VYJWM		115.58	0.43	0.36	114.56	-0.55	-0.31
3ZB24L		114.17	-0.99	-0.84	114.57	-0.53	-0.30
49XXFG		115.02	-0.14	-0.12	117.05	1.94	1.11
4FFBEF		117.30	2.14	1.82	117.90	2.80	1.60
4GCN4U		114.00	-1.16	-0.98	116.00	0.90	0.51
4GDQLL	M	115.25	0.09	0.08	No Data Reported		
4GFTM3	M	114.00	-1.16	-0.98	No Data Reported		
66E8RX		114.50	-0.66	-0.56	116.30	1.20	0.68
6A94E4		115.90	0.74	0.63	118.10	3.00	1.71
6APHKR		115.00	-0.16	-0.13	118.00	2.90	1.65
77NYHJ		117.46	2.30	1.96	117.40	2.30	1.31
782JBU		115.00	-0.16	-0.13	113.00	-2.10	-1.20
86RXXD		115.80	0.64	0.55	114.30	-0.80	-0.46
8VMVTF		115.60	0.44	0.37	115.89	0.78	0.45
8WVKUE	*	117.60	2.44	2.08	119.70	4.60	2.62
94FNBL		116.90	1.74	1.48	116.60	1.50	0.85
9DWZD6		113.30	-1.86	-1.58	113.50	-1.60	-0.91
9HUNFC		115.70	0.54	0.46	114.30	-0.80	-0.46
9U7RFA	M	114.35	-0.81	-0.69	No Data Reported		
A49VZ4		116.30	1.14	0.97	116.31	1.21	0.69
A9F2BB	M	No Data Reported			119.00	3.90	2.22
AF3K26		114.44	-0.72	-0.61	113.28	-1.83	-1.04
B8Z3T7		117.30	2.14	1.82	118.00	2.90	1.65
BB3Z4Y		116.32	1.17	0.99	117.63	2.52	1.44
BP4EP3		115.05	-0.11	-0.09	115.66	0.56	0.32
CDBT3X		116.60	1.44	1.23	115.20	0.10	0.06
CQWPXB		116.39	1.24	1.05	116.86	1.76	1.00
CTMCPJ		116.10	0.94	0.80	114.20	-0.90	-0.51
D76JAA		116.00	0.84	0.72	116.00	0.90	0.51
DDPNZP		115.15	-0.01	-0.01	115.99	0.89	0.51
DF9V64	*	112.90	-2.26	-1.92	110.00	-5.10	-2.91
DLEF4A		114.90	-0.26	-0.22	113.54	-1.57	-0.89
DQ9CXG		115.00	-0.16	-0.13	114.00	-1.10	-0.63
DRNHGQ	X	123.28	8.13	6.91	121.83	6.73	3.84
EJZFB8		113.57	-1.59	-1.35	112.70	-2.41	-1.37
EV3LRF		115.30	0.14	0.12	114.00	-1.10	-0.63
FDD3V6	X	117.48	2.33	1.98	121.54	6.44	3.67
FKCHR6		116.94	1.78	1.52	117.60	2.50	1.42
FZNE88		115.94	0.79	0.67	117.92	2.81	1.60
GCGP9C		113.18	-1.98	-1.68	114.50	-0.60	-0.34

		Sample P53			Sample P54		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
GCHG6Y		113.86	-1.30	-1.11	114.29	-0.81	-0.46
GN7C3K		112.84	-2.32	-1.97	114.93	-0.17	-0.10
GQXV4C		114.96	-0.20	-0.17	114.54	-0.56	-0.32
GX9BJY		113.90	-1.26	-1.07	113.16	-1.94	-1.11
HLXGVM		114.80	-0.36	-0.30	117.20	2.10	1.20
HMVRUB		115.90	0.74	0.63	117.50	2.40	1.37
J4WGND		116.64	1.48	1.26	114.39	-0.72	-0.41
JHBTQ7		116.60	1.44	1.23	115.90	0.80	0.45
JHDJRA		115.30	0.14	0.12	115.00	-0.10	-0.06
JRJE4Z		115.60	0.44	0.38	114.20	-0.90	-0.51
K7JNPV	X	109.88	-5.28	-4.48	108.28	-6.82	-3.89
KTTJGP	X	117.90	2.74	2.33	113.20	-1.90	-1.09
LGGHCH		114.29	-0.87	-0.74	113.71	-1.39	-0.79
LTBR7J		114.70	-0.46	-0.39	112.10	-3.00	-1.71
LVGCUJ		115.30	0.14	0.12	113.90	-1.20	-0.69
LZ8ZX4	X	120.09	4.94	4.20	119.76	4.66	2.66
M9XRAN	X	112.30	-2.86	-2.43	106.40	-8.70	-4.96
MDRVWZ		114.58	-0.58	-0.49	114.58	-0.52	-0.30
MENHU9		114.45	-0.70	-0.60	113.79	-1.31	-0.75
MGF3NP		114.44	-0.72	-0.61	114.15	-0.96	-0.55
MKTTU7		114.50	-0.66	-0.56	113.50	-1.60	-0.91
MYBBF3		113.30	-1.86	-1.58	114.40	-0.70	-0.40
N8HW22		116.60	1.44	1.23	115.50	0.40	0.23
NLY3CB	X	115.74	0.58	0.50	110.08	-5.02	-2.86
NWGDFZ		113.86	-1.30	-1.11	113.13	-1.97	-1.12
PBF9C2		113.59	-1.56	-1.33	115.73	0.62	0.36
PPXJ8A		115.31	0.15	0.13	115.60	0.49	0.28
PX72DL		113.19	-1.97	-1.67	113.40	-1.70	-0.97
QF6GBR		114.00	-1.16	-0.98	113.80	-1.30	-0.74
QLQZF2		116.32	1.17	0.99	116.32	1.22	0.69
QN283U		113.99	-1.17	-0.99	114.35	-0.75	-0.43
QU7LN6		114.40	-0.76	-0.64	114.70	-0.40	-0.23
R2NUQZ		114.40	-0.76	-0.64	115.10	0.00	0.00
R7UPAZ		113.00	-2.16	-1.83	113.00	-2.10	-1.20
R9KR74	X	120.00	4.84	4.12	116.40	1.30	0.74
RER9L4		115.97	0.81	0.69	115.97	0.87	0.49
RKE834		116.87	1.71	1.45	114.44	-0.67	-0.38
RU2L4V		115.74	0.58	0.50	116.61	1.51	0.86
RVXL2Z		114.00	-1.16	-0.98	114.00	-1.10	-0.63
RXYU7B		115.50	0.34	0.29	115.50	0.40	0.23
T3QETQ		115.60	0.44	0.38	114.50	-0.60	-0.34
TK9CW4	*	115.67	0.51	0.44	111.29	-3.81	-2.17
U3PGTP		114.40	-0.76	-0.64	116.00	0.90	0.51
UA6Y9H		116.10	0.94	0.80	115.10	0.00	0.00
UB29MU		114.60	-0.56	-0.47	114.50	-0.60	-0.34
UTKNQF		113.87	-1.29	-1.09	113.36	-1.75	-1.00
V4EANX		114.70	-0.45	-0.39	113.99	-1.11	-0.63

		Sample P53			Sample P54		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
V9TZVE	X	119.20	4.04	3.44	114.60	-0.50	-0.29
VGMA4N		115.60	0.44	0.38	114.60	-0.50	-0.29
VWFDMM		113.90	-1.26	-1.07	114.10	-1.00	-0.57
VWWEM4		116.52	1.37	1.16	115.18	0.07	0.04
W2MQ3Q		114.64	-0.52	-0.44	112.98	-2.12	-1.21
WXMW6W		113.32	-1.83	-1.56	115.57	0.46	0.26
X6GNLN		115.86	0.70	0.60	116.35	1.25	0.71
X7D3B3	X	123.00	7.84	6.67	121.00	5.90	3.36
XDDCNM		115.30	0.14	0.12	115.80	0.70	0.40
XXGUP2		115.29	0.13	0.11	114.77	-0.34	-0.19
Y43ZVM		116.00	0.85	0.72	117.10	2.00	1.14
YMHDFQ	X	118.50	3.34	2.84	115.70	0.60	0.34

Summary Statistics

	Sample P53		Sample P54	
Grand Means	115.16	ksi	115.10	ksi
Stnd Dev Btwn Labs	1.18	ksi	1.75	ksi

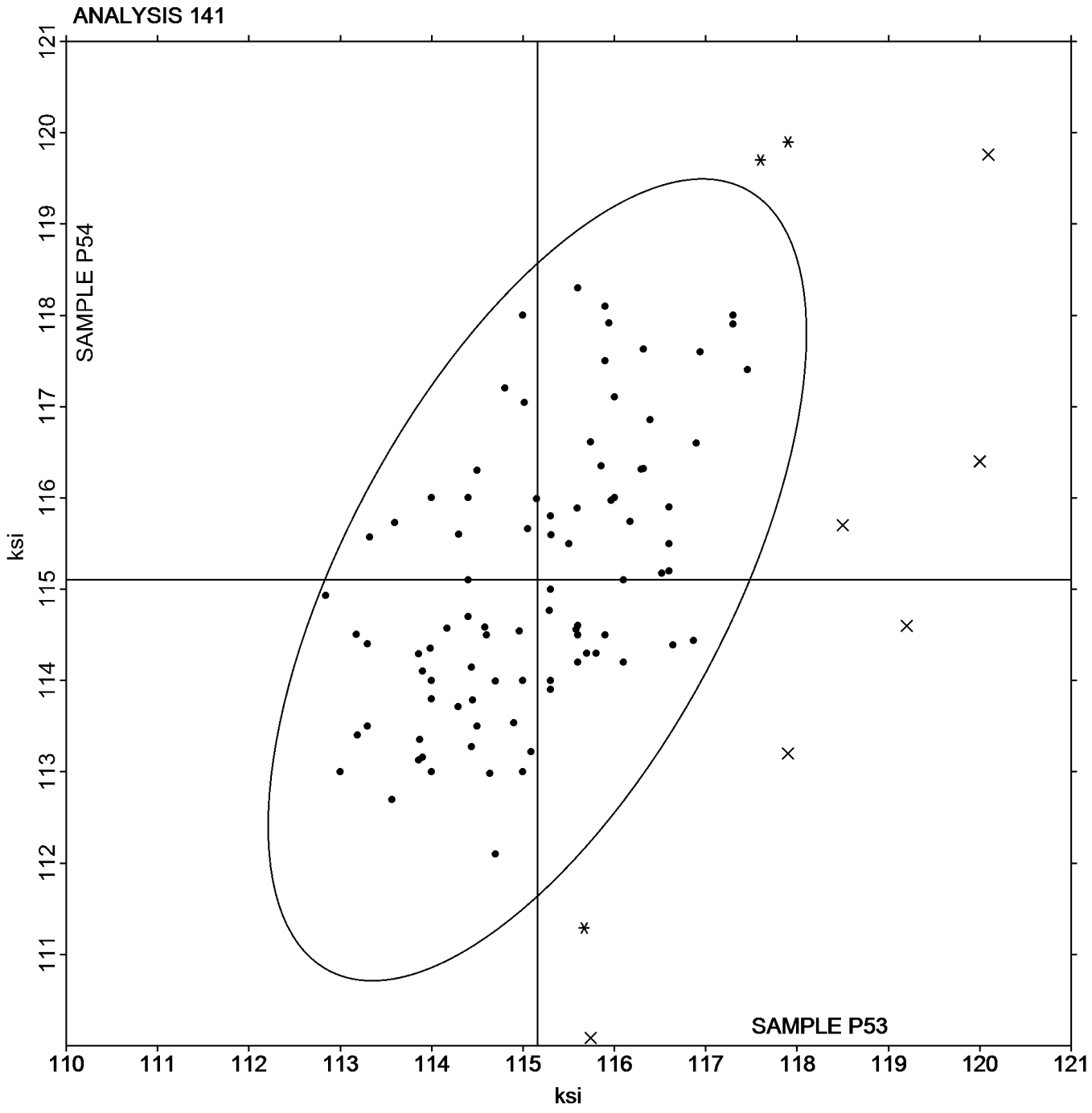
Samples P53, P54 : AISI 4340 (E), AISI 4340 (F)

Statistics based on 91 of 106 reporting participants

Comments on Assigned Data Flags for Test #141

4GDQLL (M) - Participant did not submit data for sample P54.
4GFTM3 (M) - Participant did not submit data for sample P54.
9U7RFA (M) - Participant did not submit data for sample P54.
A9F2BB (M) - Participant did not submit data for sample P53.
DRNHGQ (X) - Data for both samples are high.
FDD3V6 (X) - Data for sample P54 are high.
K7JNPV (X) - Data for both samples are low.
KTTJGP (X) - Inconsistent in testing between samples.
LZ8ZX4 (X) - Data for sample P53 are high.
M9XRAN (X) - Data for sample P54 are low.
NLY3CB (X) - Data for sample P54 are low.
R9KR74 (X) - Data for sample P53 are high.
V9TZVE (X) - Data for sample P53 are high.
X7D3B3 (X) - Data for both samples are high.
YMHDFQ (X) - Data for sample P53 are high.

SAMPLE P53	SAMPLE P54
115.16 ksi	115.10 ksi



		Sample P53			Sample P54		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
28BJY9		17.65	-0.50	-0.46	16.90	-0.67	-0.51
2CWLBD		18.80	0.65	0.59	18.20	0.63	0.48
2GL88T		18.50	0.35	0.32	18.90	1.33	1.02
2NZULB		17.30	-0.85	-0.78	16.00	-1.57	-1.20
3RZH6W		17.30	-0.85	-0.78	17.30	-0.27	-0.21
3TDCMH		17.50	-0.65	-0.60	17.00	-0.57	-0.44
3VK6GQ		16.80	-1.35	-1.24	16.50	-1.07	-0.82
3VYJWM		20.00	1.85	1.69	20.00	2.43	1.86
3ZB24L		18.60	0.45	0.41	18.30	0.73	0.56
49XXFG		18.00	-0.15	-0.14	17.70	0.13	0.10
4FFBEF	X	22.00	3.85	3.53	17.50	-0.07	-0.06
4GCN4U		18.50	0.35	0.32	16.50	-1.07	-0.82
4GDQLL	M	17.00	-1.15	-1.06	No Data Reported		
4GFTM3	M	18.00	-0.15	-0.14	No Data Reported		
66E8RX		18.70	0.55	0.50	18.80	1.23	0.94
6A94E4		18.45	0.30	0.27	16.45	-1.12	-0.86
6APHKR		18.50	0.35	0.32	16.50	-1.07	-0.82
77NYHJ		20.00	1.85	1.69	19.60	2.03	1.55
782JBU		20.70	2.55	2.34	20.70	3.13	2.39
86RXXD		17.50	-0.65	-0.60	17.00	-0.57	-0.44
8VMVTF		19.00	0.85	0.78	18.00	0.43	0.33
8WVKUE		19.50	1.35	1.23	19.00	1.43	1.09
94FNBL		17.20	-0.95	-0.88	17.00	-0.57	-0.44
9DWZD6		18.67	0.52	0.47	17.98	0.41	0.31
9HUNFC		17.50	-0.65	-0.60	16.50	-1.07	-0.82
9U7RFA		19.00	0.85	0.78	19.00	1.43	1.09
A49VZ4		19.11	0.96	0.88	18.59	1.02	0.78
A9F2BB		18.00	-0.15	-0.14	16.50	-1.07	-0.82
AF3K26		18.06	-0.09	-0.09	17.42	-0.15	-0.12
B8Z3T7		19.70	1.55	1.42	18.30	0.73	0.56
BB3Z4Y		16.80	-1.35	-1.24	15.60	-1.97	-1.51
BP4EP3		16.30	-1.85	-1.70	14.60	-2.97	-2.27
CDBT3X		18.50	0.35	0.32	18.10	0.53	0.40
CQWPXB		18.40	0.25	0.23	18.20	0.63	0.48
CTMCPJ		18.80	0.65	0.59	18.00	0.43	0.33
D76JAA		17.00	-1.15	-1.06	17.00	-0.57	-0.44
DDPNZP		17.50	-0.65	-0.60	16.70	-0.87	-0.67
DF9V64		16.50	-1.65	-1.52	16.00	-1.57	-1.20
DLEF4A		17.00	-1.15	-1.06	16.00	-1.57	-1.20
DQ9CXG		19.00	0.85	0.78	18.00	0.43	0.33
DRNHGQ	*	20.00	1.85	1.69	21.00	3.43	2.62
EJZFB8		19.30	1.15	1.05	18.50	0.93	0.71
EV3LRF		18.50	0.35	0.32	17.50	-0.07	-0.06
FDD3V6	X	16.00	-2.15	-1.98	18.00	0.43	0.33
FKCHR6	*	21.34	3.19	2.92	19.90	2.33	1.78
FZNE88		18.50	0.35	0.32	17.90	0.33	0.25
GCGP9C		19.15	1.00	0.91	17.85	0.28	0.21

		Sample P53			Sample P54		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
GCHG6Y		17.40	-0.75	-0.69	17.10	-0.47	-0.36
GN7C3K		18.90	0.75	0.68	17.80	0.23	0.17
GQXV4C		19.00	0.85	0.78	19.00	1.43	1.09
GX9BJY		19.50	1.35	1.23	18.40	0.83	0.63
HLXGVM		17.50	-0.65	-0.60	16.70	-0.87	-0.67
HMVRUB		18.90	0.75	0.68	18.90	1.33	1.02
J4WGND		17.96	-0.19	-0.18	17.81	0.24	0.18
JHBTQ7		19.80	1.65	1.51	18.42	0.85	0.65
JHDJRA		18.80	0.65	0.59	18.30	0.73	0.56
JRJE4Z		17.00	-1.15	-1.06	17.00	-0.57	-0.44
K7JNPV		17.20	-0.95	-0.88	17.20	-0.37	-0.29
KTTJGP		18.60	0.45	0.41	17.10	-0.47	-0.36
LGGHCH		17.30	-0.85	-0.78	16.00	-1.57	-1.20
LTBR7J		19.35	1.20	1.10	20.30	2.73	2.09
LVGCUJ		17.20	-0.95	-0.88	16.80	-0.77	-0.59
LZ8ZX4		17.60	-0.55	-0.51	17.76	0.19	0.14
M9XRAN		17.80	-0.35	-0.33	16.50	-1.07	-0.82
MDRVWZ		18.00	-0.15	-0.14	17.00	-0.57	-0.44
MENHU9		18.00	-0.15	-0.14	17.00	-0.57	-0.44
MGF3NP		18.00	-0.15	-0.14	19.00	1.43	1.09
MKTTU7		19.00	0.85	0.78	18.00	0.43	0.33
MYBBF3	X	21.80	3.65	3.34	14.50	-3.07	-2.35
N8HW22		17.00	-1.15	-1.06	15.20	-2.37	-1.82
NLY3CB		17.60	-0.55	-0.51	15.60	-1.97	-1.51
NWGDFZ		19.60	1.45	1.33	19.40	1.83	1.40
PBF9C2		17.30	-0.85	-0.78	16.70	-0.87	-0.67
PPXJ8A		18.40	0.25	0.23	18.60	1.03	0.79
PX72DL		19.10	0.95	0.87	18.60	1.03	0.79
QF6GBR		19.00	0.85	0.78	18.50	0.93	0.71
QLQZF2		18.40	0.25	0.23	17.50	-0.07	-0.06
QN283U		18.90	0.75	0.68	18.85	1.28	0.98
QU7LN6		18.50	0.35	0.32	18.00	0.43	0.33
R2NUQZ		17.50	-0.65	-0.60	17.00	-0.57	-0.44
R7UPAZ		18.50	0.35	0.32	17.50	-0.07	-0.06
R9KR74		16.00	-2.15	-1.98	16.50	-1.07	-0.82
RER9L4		16.48	-1.67	-1.54	15.14	-2.43	-1.86
RKE834		17.78	-0.37	-0.34	18.11	0.54	0.41
RU2L4V		18.70	0.55	0.50	17.40	-0.17	-0.13
RVXL2Z		18.50	0.35	0.32	18.00	0.43	0.33
RXYU7B		19.15	1.00	0.91	19.15	1.58	1.21
T3QETQ		17.00	-1.15	-1.06	16.50	-1.07	-0.82
TK9CW4		18.00	-0.15	-0.14	18.00	0.43	0.33
U3PGTP		18.50	0.35	0.32	18.00	0.43	0.33
UA6Y9H		16.10	-2.05	-1.88	14.50	-3.07	-2.35
UB29MU		16.00	-2.15	-1.98	16.00	-1.57	-1.20
UTKNQF		17.20	-0.95	-0.88	17.85	0.28	0.21
V4EANX		16.90	-1.25	-1.15	17.70	0.13	0.10

Fasteners and Metals Interlaboratory Testing Program

Analysis 142

Elongation: Lab-Machined Round Steel
ASTM E8

Cycle 123
3rd Qtr 2018

WebCode	Data Flag	Sample P53 Lab Mean	Sample P53 Diff. from Grand Mean	Sample P53 CPV	Sample P54 Lab Mean	Sample P54 Diff. from Grand Mean	Sample P54 CPV
V9TZVE		18.00	-0.15	-0.14	18.10	0.53	0.40
VGMA4N		17.50	-0.65	-0.60	17.00	-0.57	-0.44
VWFDMM	X	39.70	21.55	19.77	16.80	-0.77	-0.59
VWWEM4	*	15.70	-2.45	-2.25	13.70	-3.87	-2.96
W2MQ3Q		16.70	-1.45	-1.33	17.10	-0.47	-0.36
WXMW6W		17.00	-1.15	-1.06	18.00	0.43	0.33
X6GNLN	*	17.80	-0.35	-0.33	19.60	2.03	1.55
X7D3B3		19.00	0.85	0.78	17.00	-0.57	-0.44
XDDCNM		16.50	-1.65	-1.52	16.00	-1.57	-1.20
XXGUP2		18.80	0.65	0.59	18.50	0.93	0.71
Y43ZVM	*	20.20	2.05	1.88	18.10	0.53	0.40
YMHDFQ		18.20	0.05	0.04	16.30	-1.27	-0.97

Summary Statistics

	Sample P53		Sample P54	
Grand Means	18.15	Percent	17.57	Percent
Stnd Dev Btwn Labs	1.09	Percent	1.31	Percent

Samples P53, P54 : AISI 4340 (E), AISI 4340 (F)

Statistics based on 100 of 106 reporting participants

Comments on Assigned Data Flags for Test #142

4FFBEF (X) - Data for sample P53 are high.

4GDQLL (M) - Participant did not submit data for sample P54.

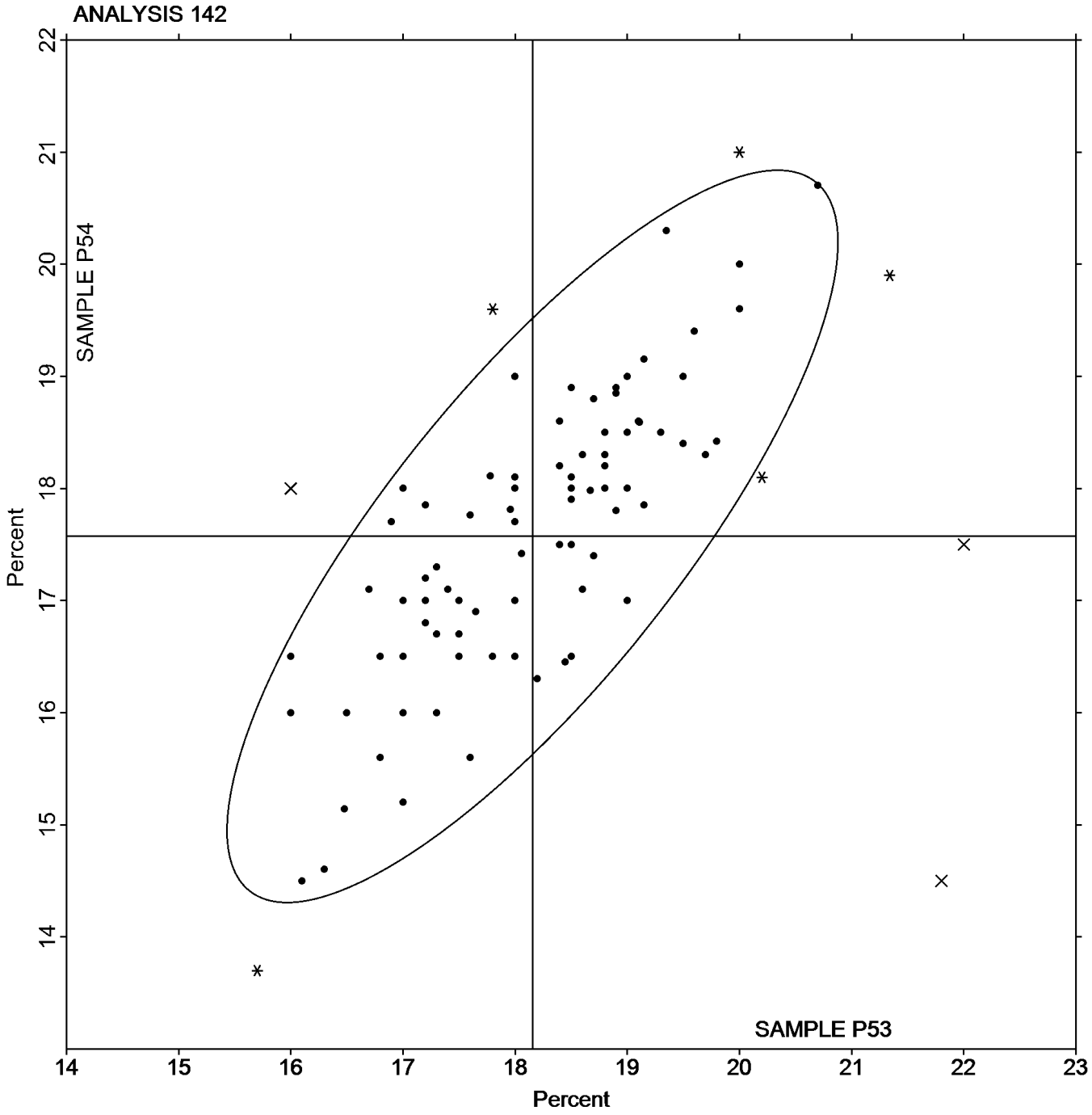
4GFTM3 (M) - Participant did not submit data for sample P54.

FDD3V6 (X) - Inconsistent in testing between samples.

MYBBF3 (X) - Data for sample P53 are high.

VWFDMM (X) - Extreme data for sample P53.

SAMPLE P53	SAMPLE P54
18.15 Percent	17.57 Percent



		Sample P53			Sample P54		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
28BJY9		54.60	-0.40	-0.34	51.50	-1.19	-0.72
2CWLBD		55.70	0.70	0.59	54.30	1.61	0.98
2GL88T		54.30	-0.70	-0.59	52.50	-0.19	-0.12
2NZULB	X	56.60	1.60	1.35	47.30	-5.39	-3.28
3RZH6W		55.20	0.20	0.17	53.10	0.41	0.25
3TDCMH		55.00	0.00	0.00	53.50	0.81	0.49
3VK6GQ		56.30	1.30	1.09	54.90	2.21	1.34
3VYJWM		54.00	-1.00	-0.84	52.00	-0.69	-0.42
3ZB24L		54.00	-1.00	-0.84	54.00	1.31	0.80
49XXFG		54.00	-1.00	-0.84	51.10	-1.59	-0.97
4FFBEF		56.30	1.30	1.09	53.60	0.91	0.55
4GCN4U		54.80	-0.20	-0.17	48.80	-3.89	-2.37
4GDQLL	M	54.00	-1.00	-0.84	No Data Reported		
4GFTM3	M	56.80	1.80	1.51	No Data Reported		
66E8RX		55.80	0.80	0.67	51.00	-1.69	-1.03
6A94E4		55.10	0.10	0.08	50.23	-2.46	-1.50
6APHKR	X	56.60	1.60	1.35	46.70	-5.99	-3.64
77NYHJ		53.35	-1.65	-1.39	51.36	-1.33	-0.81
782JBU	*	57.40	2.40	2.02	56.30	3.61	2.20
86RXXD		55.60	0.60	0.50	53.20	0.51	0.31
8VMVTF		56.00	1.00	0.84	54.00	1.31	0.80
8WVKUE		55.10	0.10	0.08	52.30	-0.39	-0.24
94FNBL		54.90	-0.10	-0.09	53.60	0.91	0.55
9DWZD6		56.57	1.57	1.32	52.41	-0.28	-0.17
9HUNFC		55.00	0.00	0.00	52.10	-0.59	-0.36
9U7RFA		56.30	1.30	1.09	53.10	0.41	0.25
A49VZ4		55.37	0.37	0.31	55.59	2.90	1.76
A9F2BB		54.60	-0.40	-0.34	51.00	-1.69	-1.03
AF3K26		55.04	0.04	0.03	53.49	0.80	0.49
B8Z3T7		57.40	2.40	2.02	53.90	1.21	0.74
BB3Z4Y	X	54.80	-0.20	-0.17	45.80	-6.89	-4.19
BP4EP3		54.90	-0.10	-0.09	49.50	-3.19	-1.94
CDBT3X		56.00	1.00	0.84	55.00	2.31	1.41
CQWPXB		55.90	0.90	0.76	53.20	0.51	0.31
CTMCPJ		56.10	1.10	0.92	54.30	1.61	0.98
D76JAA		55.00	0.00	0.00	53.00	0.31	0.19
DDPNZP		56.20	1.20	1.01	53.20	0.51	0.31
DF9V64		55.10	0.10	0.08	54.30	1.61	0.98
DLEF4A		53.70	-1.30	-1.10	52.90	0.21	0.13
DQ9CXG		56.00	1.00	0.84	55.00	2.31	1.41
DRNHGQ		55.00	0.00	0.00	54.00	1.31	0.80
EJZFB8		57.10	2.10	1.77	54.40	1.71	1.04
EV3LRF		53.60	-1.40	-1.18	52.80	0.11	0.07
FDD3V6	X	39.50	-15.50	-13.05	47.60	-5.09	-3.10
FKCHR6		54.87	-0.13	-0.11	54.23	1.54	0.94
FZNE88		54.20	-0.80	-0.67	52.60	-0.09	-0.05
GCGP9C		54.84	-0.16	-0.13	51.56	-1.13	-0.69

		Sample P53			Sample P54		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
GCHG6Y		55.40	0.40	0.34	52.30	-0.39	-0.24
GN7C3K		55.27	0.27	0.23	51.56	-1.13	-0.69
GQXV4C		53.00	-2.00	-1.68	53.00	0.31	0.19
GX9BJY		55.10	0.10	0.08	53.60	0.91	0.55
HLXGVM		57.50	2.50	2.10	52.70	0.01	0.01
HMVRUB		53.60	-1.40	-1.18	53.30	0.61	0.37
J4WGND		54.49	-0.51	-0.43	49.44	-3.25	-1.98
JHBTQ7		56.20	1.20	1.01	50.40	-2.29	-1.39
JHDJRA		56.70	1.70	1.43	54.70	2.01	1.22
JRJE4Z		53.60	-1.40	-1.18	53.30	0.61	0.37
K7JNPV		55.02	0.02	0.02	53.60	0.91	0.55
LGGHCH	X	49.50	-5.50	-4.63	52.00	-0.69	-0.42
LTBR7J		53.60	-1.40	-1.18	52.50	-0.19	-0.12
LVGCUJ		55.50	0.50	0.42	53.80	1.11	0.68
LZ8ZX4		56.58	1.58	1.33	52.58	-0.11	-0.07
M9XRAN	X	58.90	3.90	3.28	57.50	4.81	2.93
MDRVWZ		56.00	1.00	0.84	53.00	0.31	0.19
MENHU9		54.00	-1.00	-0.84	53.00	0.31	0.19
MGF3NP		53.00	-2.00	-1.68	54.00	1.31	0.80
MKTTU7		55.70	0.70	0.59	53.30	0.61	0.37
MYBBF3		55.20	0.20	0.17	52.80	0.11	0.07
N8HW22		54.90	-0.10	-0.09	49.30	-3.39	-2.06
NLY3CB	X	56.00	1.00	0.84	46.20	-6.49	-3.95
NWGDFZ		55.30	0.30	0.25	52.60	-0.09	-0.05
PBF9C2		56.30	1.30	1.09	52.40	-0.29	-0.18
PPXJ8A		53.90	-1.10	-0.93	53.30	0.61	0.37
PX72DL		56.10	1.10	0.92	53.10	0.41	0.25
QF6GBR		55.70	0.70	0.59	53.00	0.31	0.19
QLQZF2		52.30	-2.70	-2.27	51.50	-1.19	-0.72
QN283U		55.02	0.02	0.02	54.84	2.15	1.31
QU7LN6	X	54.70	-0.30	-0.25	46.40	-6.29	-3.83
R2NUQZ		55.20	0.20	0.17	52.40	-0.29	-0.18
R7UPAZ		54.75	-0.25	-0.21	52.22	-0.47	-0.29
R9KR74		53.90	-1.10	-0.93	53.50	0.81	0.49
RER9L4		53.32	-1.68	-1.42	50.53	-2.16	-1.31
RKE834		54.66	-0.34	-0.29	52.68	-0.01	-0.01
RU2L4V		56.00	1.00	0.84	52.00	-0.69	-0.42
RVXL2Z		55.80	0.80	0.67	54.50	1.81	1.10
RXYU7B		55.82	0.82	0.69	52.96	0.27	0.16
T3QETQ		53.60	-1.40	-1.18	50.80	-1.89	-1.15
TK9CW4		55.00	0.00	0.00	53.00	0.31	0.19
U3PGTP	*	52.00	-3.00	-2.53	51.80	-0.89	-0.54
UA6Y9H	*	56.20	1.20	1.01	49.00	-3.69	-2.25
UB29MU		55.30	0.30	0.25	52.10	-0.59	-0.36
UTKNQF		53.87	-1.13	-0.95	53.06	0.37	0.23
V4EANX		53.20	-1.80	-1.52	53.60	0.91	0.55
V9TZVE		57.00	2.00	1.68	56.00	3.31	2.01

WebCode	Data Flag	Sample P53 Lab Mean	Sample P53 Diff. from Grand Mean	Sample P53 CPV	Sample P54 Lab Mean	Sample P54 Diff. from Grand Mean	Sample P54 CPV
VGMA4N		54.60	-0.40	-0.34	53.20	0.51	0.31
VWFDMM		53.40	-1.60	-1.35	51.50	-1.19	-0.72
VWWEM4		52.80	-2.20	-1.85	51.40	-1.29	-0.78
W2MQ3Q		52.50	-2.50	-2.11	51.30	-1.39	-0.85
WXMW6W		53.00	-2.00	-1.68	51.00	-1.69	-1.03
X6GNLN		56.30	1.30	1.09	53.90	1.21	0.74
X7D3B3	*	55.00	0.00	0.00	48.00	-4.69	-2.85
XDDCNM		55.00	0.00	0.00	52.20	-0.49	-0.30
XXGUP2		55.90	0.90	0.76	55.90	3.21	1.95
Y43ZVM		55.00	0.00	0.00	53.00	0.31	0.19
YMHDFQ	*	54.80	-0.20	-0.17	48.20	-4.49	-2.73

Summary Statistics

	Sample P53		Sample P54	
Grand Means	55.00	Percent	52.69	Percent
Stnd Dev Btwn Labs	1.19	Percent	1.64	Percent

Samples P53, P54 : AISI 4340(E), AISI 4340 (F)

Statistics based on 95 of 105 reporting participants

Comments on Assigned Data Flags for Test #143

2NZULB (X) - Data for sample P54 are low.

4GDQLL (M) - Participant did not submit data for sample P54.

4GFTM3 (M) - Participant did not submit data for sample P54.

6APHKR (X) - Data for sample P54 are low.

BB3Z4Y (X) - Data for sample P54 are low.

FDD3V6 (X) - Data for both samples are low.

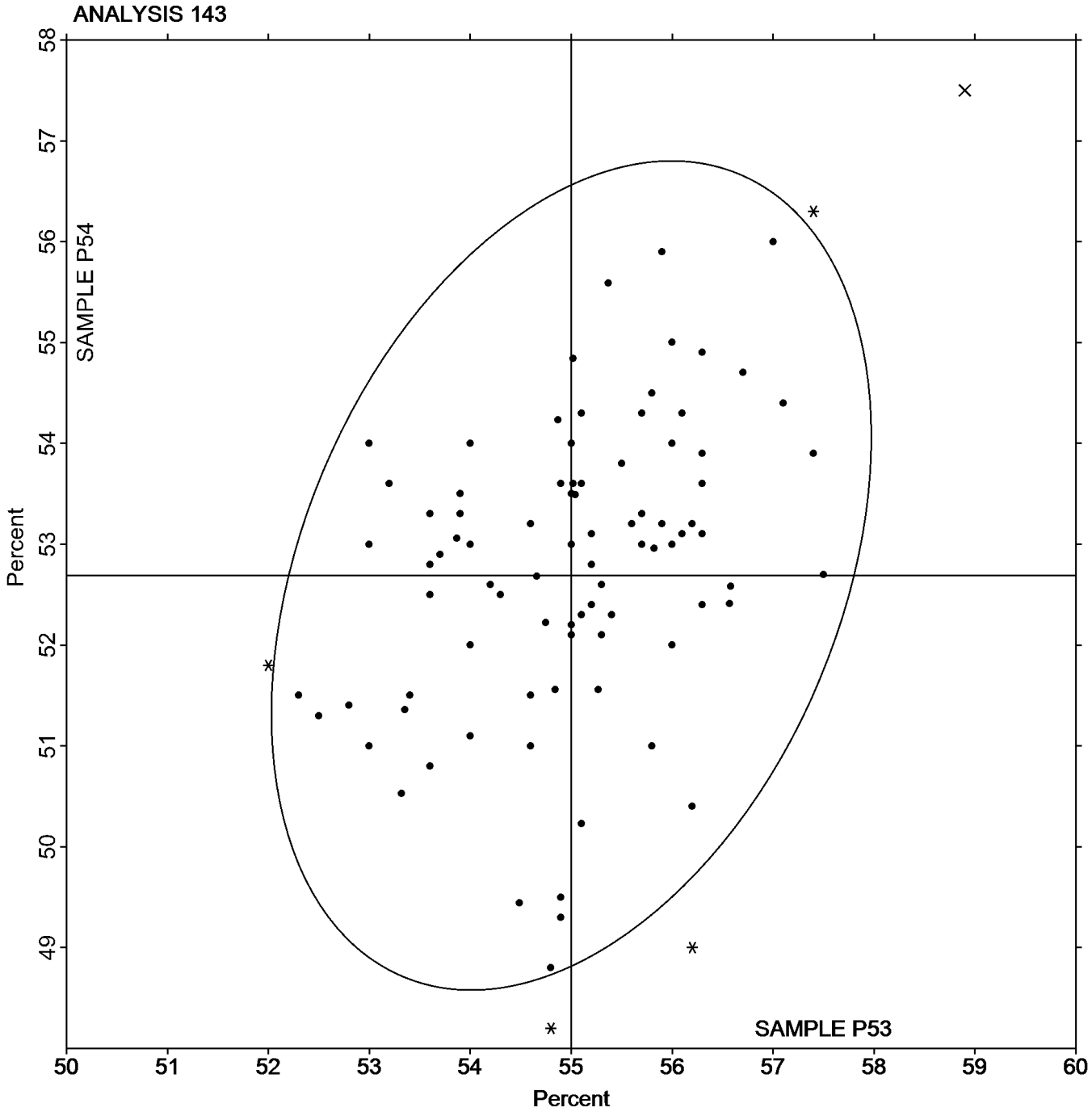
LGGHCH (X) - Data for sample P53 are low.

M9XRAN (X) - Data for both samples are high.

NLY3CB (X) - Data for sample P54 are low.

QU7LN6 (X) - Data for sample P54 are low.

SAMPLE P53	SAMPLE P54
55.00 Percent	52.69 Percent



		Sample L53			Sample L54			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
2BBT64		0.3933	-0.0010	-0.10	0.3967	0.0011	0.10	OE
2CWLBD		0.3967	0.0024	0.24	0.3923	-0.0032	-0.28	OE
2G2PUK		0.3917	-0.0026	-0.27	0.3957	0.0001	0.01	OE
2GL88T		0.3750	-0.0193	-1.99	0.3833	-0.0122	-1.06	OE
2TCA8L		0.4047	0.0104	1.07	0.4070	0.0114	0.99	CI
2YKK9T		0.3967	0.0024	0.25	0.3942	-0.0014	-0.12	OE
3489FD		0.3973	0.0030	0.31	0.3997	0.0041	0.36	CO
3Q6743		0.4052	0.0109	1.13	0.3941	-0.0015	-0.13	OE
47FH9B		0.3957	0.0014	0.14	0.3917	-0.0039	-0.34	GD
49XXFG		0.3870	-0.0073	-0.75	0.3857	-0.0099	-0.86	OE
4DFHR3		0.3951	0.0008	0.08	0.3957	0.0001	0.01	CI
4FFBEF		0.3987	0.0044	0.45	0.3930	-0.0026	-0.22	OE
4KG89G		0.3970	0.0027	0.28	0.4157	0.0201	1.74	OE
4UG2ZK		0.3877	-0.0066	-0.68	0.3967	0.0012	0.10	OE
66GWUA		0.3950	0.0007	0.07	0.3953	-0.0002	-0.02	OE
69WXVD		0.4047	0.0104	1.07	0.3867	-0.0089	-0.77	AE
6UUCKB		0.3930	-0.0013	-0.14	0.4030	0.0074	0.64	OE
77U9EQ		0.3973	0.0030	0.31	0.4023	0.0068	0.59	OE
7YB3J6		0.3973	0.0030	0.31	0.3861	-0.0094	-0.82	OE
7ZK8XT		0.3933	-0.0010	-0.10	0.4050	0.0094	0.82	OE
8FAFT7		0.3847	-0.0096	-0.99	0.3753	-0.0202	-1.75	OE
8MQ62D		0.4034	0.0091	0.94	0.4000	0.0044	0.38	OE
8NM9GG		0.3937	-0.0006	-0.06	0.3965	0.0009	0.08	GD
94FNBL		0.4057	0.0114	1.17	0.3973	0.0018	0.15	OE
97HJ3N		0.3870	-0.0073	-0.75	0.3860	-0.0096	-0.83	OE
9D6AQ6		0.3870	-0.0073	-0.75	0.3980	0.0024	0.21	OE
9J6P37		0.3867	-0.0076	-0.79	0.3900	-0.0056	-0.48	OE
9U7RFA		0.4123	0.0180	1.86	0.4083	0.0128	1.11	OE
9X3ZKA		0.4027	0.0084	0.86	0.4057	0.0101	0.88	OE
ABR4JU		0.3880	-0.0063	-0.65	0.3860	-0.0096	-0.83	OE
AF3K26		0.3903	-0.0040	-0.41	0.3880	-0.0076	-0.65	OE
ANUM47		0.3827	-0.0116	-1.20	0.3893	-0.0062	-0.54	OE
AVZ7KK		0.3895	-0.0048	-0.49	0.3941	-0.0015	-0.13	OE
AXKNFK		0.3967	0.0024	0.24	0.3933	-0.0022	-0.19	OE
B3A8XK		0.3917	-0.0026	-0.27	0.4030	0.0074	0.64	CO
B7QVUK		0.3811	-0.0132	-1.36	0.3837	-0.0118	-1.02	OE
BB3Z4Y		0.3957	0.0014	0.14	0.3960	0.0004	0.04	CI
BE4FTF		0.3850	-0.0093	-0.96	0.3863	-0.0092	-0.80	CI
C2BDRY		0.3917	-0.0026	-0.27	0.3860	-0.0096	-0.83	OE
CBJ4CP		0.4033	0.0090	0.93	0.4003	0.0048	0.41	OE
DERQGE		0.3943	0.0000	0.00	0.4030	0.0074	0.64	CI
DNHCNX		0.3893	-0.0050	-0.51	0.3857	-0.0099	-0.86	XX
DPBTN8		0.4135	0.0192	1.98	0.4009	0.0053	0.46	OE
DPWMUH		0.4133	0.0190	1.96	0.4240	0.0284	2.46	OE
DQ8H6N		0.4127	0.0184	1.89	0.4023	0.0068	0.59	OE
DURWZJ		0.4087	0.0144	1.48	0.3993	0.0038	0.33	OE
EMKAEE	X	0.4353	0.0410	4.23	0.4320	0.0364	3.16	GD

		Sample L53			Sample L54			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
ERWWW6		0.3917	-0.0026	-0.27	0.4074	0.0119	1.03	OE
F3BMA7		0.3845	-0.0098	-1.01	0.3820	-0.0136	-1.17	OE
F7HPMQ		0.3973	0.0030	0.31	0.4010	0.0054	0.47	CI
F83F7G		0.3883	-0.0060	-0.62	0.3873	-0.0082	-0.71	OE
FHLV9J		0.3987	0.0044	0.45	0.3933	-0.0022	-0.19	OE
FLPM3H		0.3947	0.0004	0.04	0.4027	0.0071	0.62	IR
FUF98U	*	0.3667	-0.0276	-2.85	0.3783	-0.0173	-1.49	OE
FVDTC9		0.3837	-0.0106	-1.10	0.3933	-0.0022	-0.19	OE
FX43C2		0.3917	-0.0026	-0.27	0.3943	-0.0012	-0.11	OE
FXL2ND		0.3837	-0.0106	-1.10	0.3963	0.0008	0.07	CI
GCGP9C		0.3917	-0.0026	-0.27	0.3947	-0.0009	-0.08	OE
GCHG6Y		0.3980	0.0037	0.38	0.4040	0.0084	0.73	GD
GEHW8V		0.4137	0.0194	2.00	0.4250	0.0294	2.55	OE
GFGN8H		0.3805	-0.0138	-1.42	0.3995	0.0039	0.34	CO
GKL4LX		0.4120	0.0177	1.82	0.4147	0.0191	1.65	OE
GN7C3K		0.3946	0.0003	0.03	0.3986	0.0031	0.27	CI
GRBXWC		0.4057	0.0114	1.17	0.4153	0.0198	1.71	OE
GT7WDC		0.3933	-0.0010	-0.10	0.3933	-0.0022	-0.19	OE
GVE4RC		0.3843	-0.0100	-1.04	0.3811	-0.0145	-1.26	XX
GWQ9C2		0.3993	0.0050	0.52	0.3820	-0.0136	-1.17	OE
H2VRLE		0.4093	0.0150	1.55	0.4150	0.0194	1.68	OE
HYPF2X		0.3960	0.0017	0.17	0.3883	-0.0073	-0.63	OE
J68JCW		0.3960	0.0017	0.17	0.4007	0.0051	0.44	OE
JDZAR8		0.4003	0.0060	0.62	0.4037	0.0081	0.70	CI
JHBTQ7	*	0.3683	-0.0260	-2.68	0.3633	-0.0322	-2.79	GD
JNZ9GY		0.4017	0.0074	0.76	0.4140	0.0184	1.60	CI
JUVQ9W		0.3877	-0.0066	-0.69	0.3837	-0.0119	-1.03	OE
JVHBKN		0.3920	-0.0023	-0.24	0.3870	-0.0086	-0.74	DR
JXTDZZ		0.3777	-0.0167	-1.72	0.3844	-0.0112	-0.97	OE
JY4UQT		0.3812	-0.0131	-1.36	0.3846	-0.0110	-0.95	OE
K734WB		0.4150	0.0207	2.13	0.4107	0.0151	1.31	GD
KE88UT		0.4014	0.0071	0.73	0.4021	0.0065	0.56	OE
KG2CFN		0.4077	0.0134	1.38	0.4017	0.0061	0.53	OE
KTUBDC		0.4010	0.0067	0.69	0.4097	0.0141	1.22	CI
KWBGMZ		0.3763	-0.0180	-1.85	0.3750	-0.0206	-1.78	OE
L238T3		0.3890	-0.0053	-0.54	0.3937	-0.0018	-0.16	OE
L6HXWC	X	0.3510	-0.0433	-4.47	0.3483	-0.0472	-4.09	CO
LQ2YYX		0.4131	0.0188	1.94	0.4141	0.0185	1.60	OE
LT78VV		0.3860	-0.0083	-0.86	0.3937	-0.0019	-0.16	CI
LU7FD9		0.3923	-0.0020	-0.20	0.3870	-0.0086	-0.74	OE
LXYNF3		0.3930	-0.0013	-0.14	0.3920	-0.0036	-0.31	OE
LZ8ZX4		0.3914	-0.0029	-0.30	0.3976	0.0020	0.17	OE
MENHU9		0.3913	-0.0030	-0.31	0.3943	-0.0012	-0.11	CI
MGF3NP		0.3927	-0.0016	-0.17	0.4040	0.0084	0.73	DR
MT7C7X		0.3961	0.0018	0.18	0.3973	0.0017	0.15	AE
N7AKJY		0.3940	-0.0003	-0.03	0.3983	0.0028	0.24	OE
N8HW22	*	0.3813	-0.0130	-1.34	0.3623	-0.0332	-2.88	GD

		Sample L53			Sample L54			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
NA48WU		0.3797	-0.0146	-1.51	0.3803	-0.0152	-1.32	OE
ND7N33		0.3943	0.0000	0.00	0.4023	0.0068	0.59	CI
NFD7TU		0.3820	-0.0123	-1.27	0.3837	-0.0119	-1.03	OE
NFDB3W		0.3966	0.0023	0.24	0.3780	-0.0176	-1.52	OE
NH4WZJ		0.4045	0.0102	1.05	0.4044	0.0088	0.76	OE
NQCGWZ		0.3939	-0.0004	-0.05	0.3782	-0.0174	-1.50	OE
P972A9		0.3863	-0.0080	-0.82	0.3937	-0.0019	-0.16	CI
PPXJ8A		0.3881	-0.0062	-0.64	0.3895	-0.0061	-0.53	AE
PWVT6V		0.3900	-0.0043	-0.44	0.4100	0.0144	1.25	GD
PWW6WN		0.3913	-0.0030	-0.31	0.4063	0.0108	0.93	CI
Q3U7JV		0.3838	-0.0105	-1.09	0.3792	-0.0163	-1.41	OE
Q8QV3N		0.3853	-0.0090	-0.93	0.3832	-0.0123	-1.07	OE
QDWW8X		0.3943	0.0000	0.00	0.4077	0.0121	1.05	CI
QLWWTC	X	0.3950	0.0007	0.07	0.6563	0.2608	22.58	OE
QN283U		0.3987	0.0044	0.45	0.3943	-0.0012	-0.11	GD
QTA9YR		0.3897	-0.0047	-0.48	0.3918	-0.0038	-0.33	OE
R4RPDA	X	0.3573	-0.0370	-3.81	0.3583	-0.0372	-3.22	OE
R7FLUX		0.3980	0.0037	0.38	0.4020	0.0064	0.56	CO
R7JLZH		0.3987	0.0044	0.45	0.3980	0.0024	0.21	OE
R8Q4YE		0.4086	0.0143	1.47	0.4075	0.0119	1.03	OE
R9KR74		0.4127	0.0184	1.89	0.3977	0.0021	0.18	OE
RP7G9W		0.3867	-0.0076	-0.79	0.3833	-0.0122	-1.06	OE
RU2L4V		0.3920	-0.0023	-0.24	0.4053	0.0098	0.85	CI
TK9CW4		0.3940	-0.0003	-0.03	0.3927	-0.0029	-0.25	OE
TW84N3		0.3957	0.0014	0.14	0.3943	-0.0012	-0.11	DR
TYDC7V		0.3991	0.0048	0.50	0.4032	0.0077	0.66	CO
UBH6XX		0.3917	-0.0026	-0.27	0.4020	0.0064	0.56	CI
UC9VRL		0.3913	-0.0030	-0.31	0.3840	-0.0116	-1.01	OE
UTKNQF		0.3820	-0.0123	-1.27	0.3800	-0.0156	-1.35	OE
VDF3JX		0.3898	-0.0045	-0.47	0.3827	-0.0129	-1.12	OE
VDK6FH		0.3890	-0.0053	-0.55	0.4030	0.0074	0.64	OE
VLEEXT		0.4002	0.0059	0.61	0.4039	0.0083	0.72	OE
VQPGVG		0.4060	0.0117	1.21	0.4171	0.0216	1.87	OE
VWFDMM		0.3833	-0.0110	-1.13	0.3820	-0.0136	-1.17	OE
WQREUJ		0.4040	0.0097	1.00	0.4220	0.0264	2.29	OE
WTNEGU		0.3910	-0.0033	-0.34	0.3883	-0.0072	-0.63	OE
WXMW6W		0.3922	-0.0021	-0.22	0.3795	-0.0161	-1.39	OE
X6GNLN		0.3950	0.0007	0.07	0.4073	0.0118	1.02	CI
X7D3B3		0.4100	0.0157	1.62	0.3900	-0.0056	-0.48	GD
XDDCNM		0.4096	0.0153	1.58	0.4179	0.0223	1.93	CO
XJ2LXB		0.3853	-0.0090	-0.93	0.3877	-0.0079	-0.68	OE
XL4EYV		0.3954	0.0011	0.11	0.4046	0.0090	0.78	IR
XXGUP2		0.3897	-0.0046	-0.48	0.3957	0.0001	0.01	OE
XXHGBL		0.3877	-0.0066	-0.69	0.3895	-0.0060	-0.52	CI
Y2DMEP		0.3867	-0.0076	-0.79	0.3847	-0.0109	-0.94	OE
YGQ4CK		0.4023	0.0080	0.83	0.4033	0.0078	0.67	OE
YNQ78E		0.4073	0.0130	1.34	0.4083	0.0128	1.11	OE

Fasteners and Metals Interlaboratory Testing Program

Analysis 170

Carbon & Low Alloy Steel, Element #1
CARBON (C)

WebCode	Data Flag	Sample L53 Lab Mean	Sample L53 Diff. from Grand Mean	Sample L53 CPV	Sample L54 Lab Mean	Sample L54 Diff. from Grand Mean	Sample L54 CPV	Method
YPLHDE		0.3980	0.0037	0.38	0.3873	-0.0082	-0.71	OE
YTJC8F		0.3837	-0.0106	-1.10	0.3937	-0.0019	-0.16	OE
YUH43W		0.4163	0.0220	2.27	0.4235	0.0279	2.42	OE
YUHKBT		0.3950	0.0007	0.07	0.3930	-0.0026	-0.22	OE
Z69U7T		0.3823	-0.0120	-1.24	0.3780	-0.0176	-1.52	OE
Z7746P		0.3804	-0.0139	-1.43	0.3806	-0.0150	-1.30	OE
ZD4CPP		0.4129	0.0186	1.92	0.4044	0.0088	0.76	XX

Summary Statistics

	Sample L53		Sample L54	
Grand Means	0.3943	Percent	0.3956	Percent
Stnd Dev Btwn Labs	0.0097	Percent	0.0115	Percent

Samples L53, L54 : AISI 8740 - UNS G87400, AISI 8740 - UNS G87400

Statistics based on 144 of 148 reporting participants

Key to Method Codes Reported by Participants

AE	Spectrometry - Atomic Emission (AES)	CI	Combustion / IR
CO	Combustion	DR	Spectrometry - Direct Reading OE (DROES)
GD	Spectrometry - Glow Discharge (GDS)	IR	IR (Absorption / Detection)
OE	Spectrometry - Optical Emission (OES)	XX	Please Indicate Method Used for Current Element

Comments on Assigned Data Flags for Test #170

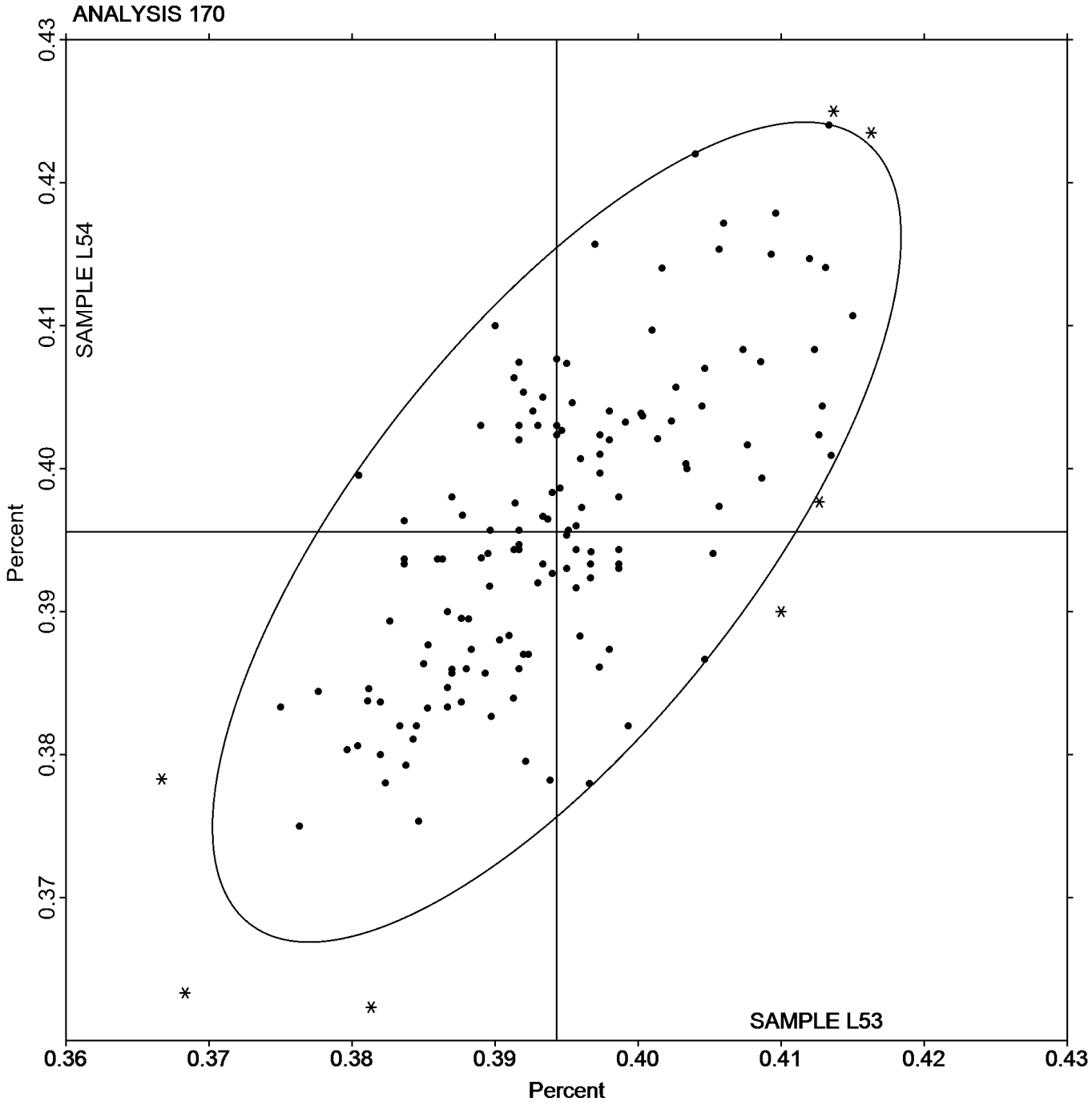
EMKAEE (X) - Data for both samples are high.

L6HXWC (X) - Data for both samples are low.

QLWWTC (X) - Extreme data for sample L54

R4RPDA (X) - Data for both samples are low.

SAMPLE L53	SAMPLE L54
0.3943 Percent	0.3956 Percent



		Sample L53			Sample L54			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
2BBT64		0.8467	0.0127	1.24	0.9667	0.0231	1.68	OE
2CWLBD		0.8430	0.0090	0.88	0.9410	-0.0026	-0.19	OE
2G2PUK		0.8323	-0.0017	-0.16	0.9487	0.0051	0.37	OE
2GL88T		0.8197	-0.0143	-1.40	0.9310	-0.0126	-0.92	OE
2NZULB		0.8317	-0.0023	-0.22	0.9244	-0.0192	-1.40	WD
2TCA8L	X	0.8392	0.0052	0.51	0.9187	-0.0249	-1.82	OE
2YKK9T		0.8431	0.0091	0.89	0.9544	0.0108	0.78	OE
3489FD		0.8320	-0.0020	-0.20	0.9383	-0.0053	-0.38	OE
3Q6743		0.8470	0.0130	1.27	0.9556	0.0120	0.87	OE
47FH9B		0.8373	0.0033	0.33	0.9450	0.0014	0.10	GD
49XXFG		0.8247	-0.0093	-0.91	0.9227	-0.0209	-1.52	OE
4DFHR3		0.8333	-0.0007	-0.07	0.9458	0.0022	0.16	IC
4FFBEF		0.8220	-0.0120	-1.17	0.9313	-0.0123	-0.89	OE
4KG89G		0.8233	-0.0107	-1.04	0.9533	0.0097	0.71	OE
4T3WUA	*	0.8633	0.0293	2.87	0.9767	0.0331	2.41	IC
4UG2ZK		0.8270	-0.0070	-0.68	0.9359	-0.0077	-0.56	OE
66GWUA		0.8243	-0.0097	-0.95	0.9330	-0.0106	-0.77	OE
69WXVD		0.8397	0.0057	0.55	0.9370	-0.0066	-0.48	AE
6NWLC8		0.8273	-0.0067	-0.65	0.9567	0.0131	0.95	XX
6UUCKB		0.8393	0.0053	0.52	0.9480	0.0044	0.32	OE
77U9EQ		0.8253	-0.0087	-0.85	0.9447	0.0011	0.08	OE
7YB3J6	X	0.7557	-0.0783	-7.66	0.8515	-0.0922	-6.71	OE
7ZK8XT		0.8383	0.0043	0.42	0.9503	0.0067	0.49	OE
8FAFT7		0.8360	0.0020	0.20	0.9303	-0.0133	-0.97	OE
8MQ62D		0.8286	-0.0054	-0.52	0.9370	-0.0066	-0.48	OE
8NM9GG		0.8595	0.0255	2.49	0.9775	0.0339	2.46	XX
94FNBL		0.8347	0.0007	0.07	0.9353	-0.0083	-0.60	OE
97HJ3N		0.8206	-0.0134	-1.31	0.9298	-0.0138	-1.01	OE
9D6AQ6		0.8223	-0.0117	-1.14	0.9267	-0.0169	-1.23	IC
9J6P37		0.8367	0.0027	0.26	0.9533	0.0097	0.71	OE
9U7RFA		0.8373	0.0033	0.33	0.9380	-0.0056	-0.41	OE
9X3ZKA		0.8323	-0.0017	-0.16	0.9440	0.0004	0.03	OE
ABR4JU		0.8337	-0.0003	-0.03	0.9440	0.0004	0.03	OE
AF3K26		0.8313	-0.0027	-0.26	0.9363	-0.0073	-0.53	OE
ANUM47		0.8557	0.0217	2.12	0.9723	0.0287	2.09	OE
AVZ7KK		0.8466	0.0126	1.24	0.9682	0.0246	1.79	OE
AXKNFK		0.8307	-0.0033	-0.33	0.9320	-0.0116	-0.84	OE
B3A8XK		0.8287	-0.0053	-0.52	0.9383	-0.0053	-0.38	IC
B7QVUK		0.8324	-0.0016	-0.16	0.9400	-0.0036	-0.26	OE
BB3Z4Y		0.8377	0.0037	0.36	0.9530	0.0094	0.68	OE
BE4FTF		0.8357	0.0017	0.16	0.9443	0.0007	0.05	IC
BXTU6J	X	0.0855	-0.7485	-73.19	0.1050	-0.8386	-61.03	IC
C2BDRY		0.8487	0.0147	1.43	0.9483	0.0047	0.34	XX
CBJ4CP		0.8313	-0.0027	-0.26	0.9303	-0.0133	-0.97	OE
DD48L9		0.8213	-0.0127	-1.24	0.9357	-0.0079	-0.58	XX
DERQGE		0.8240	-0.0100	-0.98	0.9303	-0.0133	-0.97	IC
DNHCNX		0.8183	-0.0157	-1.53	0.9333	-0.0103	-0.75	XX

		Sample L53			Sample L54			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
DPBTN8		0.8318	-0.0022	-0.21	0.9353	-0.0083	-0.60	OE
DPWMUH	X	0.8677	0.0337	3.29	0.9870	0.0434	3.16	OE
DQ8H6N		0.8497	0.0157	1.53	0.9497	0.0061	0.44	OE
DURWZJ		0.8377	0.0037	0.36	0.9457	0.0021	0.15	OE
EMKAEE		0.8397	0.0057	0.55	0.9600	0.0164	1.19	GD
ERWWW6		0.8246	-0.0094	-0.92	0.9322	-0.0114	-0.83	OE
F3BMA7		0.8091	-0.0249	-2.44	0.9092	-0.0344	-2.50	OE
F7HPMQ		0.8433	0.0093	0.91	0.9470	0.0034	0.25	AE
F83F7G		0.8280	-0.0060	-0.59	0.9317	-0.0119	-0.87	OE
FHLV9J		0.8453	0.0113	1.11	0.9520	0.0084	0.61	XX
FLPM3H		0.8407	0.0067	0.65	0.9433	-0.0003	-0.02	OE
FUF98U		0.8273	-0.0067	-0.65	0.9273	-0.0163	-1.18	OE
FVDTC9		0.8337	-0.0003	-0.03	0.9513	0.0077	0.56	OE
FX43C2		0.8487	0.0147	1.43	0.9600	0.0164	1.19	OE
FXL2ND		0.8059	-0.0281	-2.74	0.9183	-0.0253	-1.84	IC
GCGP9C		0.8387	0.0047	0.46	0.9403	-0.0033	-0.24	OE
GCHG6Y		0.8407	0.0067	0.65	0.9690	0.0254	1.85	GD
GEHW8V		0.8483	0.0143	1.40	0.9750	0.0314	2.28	OE
GFGN8H		0.8297	-0.0043	-0.42	0.9314	-0.0122	-0.89	WD
GKL4LX		0.8323	-0.0017	-0.16	0.9403	-0.0033	-0.24	OE
GN7C3K		0.8454	0.0114	1.11	0.9464	0.0028	0.20	OE
GRBXWC		0.8280	-0.0060	-0.59	0.9423	-0.0013	-0.09	OE
GT7WDC		0.8300	-0.0040	-0.39	0.9333	-0.0103	-0.75	OE
GVE4RC		0.8212	-0.0128	-1.25	0.9316	-0.0120	-0.88	OE
GWQ9C2		0.8370	0.0030	0.29	0.9370	-0.0066	-0.48	OE
H2VRLE		0.8483	0.0143	1.40	0.9607	0.0171	1.24	OE
HYPF2X		0.8363	0.0023	0.22	0.9374	-0.0062	-0.45	OE
J68JCW		0.8467	0.0127	1.24	0.9607	0.0171	1.24	OE
JDZAR8		0.8310	-0.0030	-0.29	0.9363	-0.0073	-0.53	OE
JHBTQ7		0.8490	0.0150	1.47	0.9687	0.0251	1.82	GD
JNZ9GY	X	0.9000	0.0660	6.45	1.008	0.0644	4.69	IC
JUVQ9W		0.8187	-0.0153	-1.50	0.9250	-0.0186	-1.35	OE
JVHBKN		0.8343	0.0003	0.03	0.9363	-0.0073	-0.53	DR
JXTDZZ		0.8347	0.0007	0.07	0.9408	-0.0028	-0.20	OE
JY4UQT		0.8341	0.0001	0.01	0.9279	-0.0157	-1.14	OE
K734WB	X	0.8047	-0.0293	-2.87	0.9303	-0.0133	-0.97	GD
KE88UT		0.8360	0.0020	0.20	0.9374	-0.0062	-0.45	OE
KG2CFN		0.8457	0.0117	1.14	0.9727	0.0291	2.11	OE
KTUBDC		0.8180	-0.0160	-1.56	0.9323	-0.0113	-0.82	WD
KWBGMZ		0.8280	-0.0060	-0.59	0.9353	-0.0083	-0.60	OE
L238T3		0.8393	0.0053	0.52	0.9538	0.0102	0.74	OE
L6HXWC		0.8367	0.0027	0.26	0.9680	0.0244	1.77	OE
LQ2YYX		0.8474	0.0134	1.31	0.9527	0.0091	0.66	OE
LT78VV		0.8227	-0.0113	-1.11	0.9388	-0.0048	-0.35	OE
LU7FD9		0.8260	-0.0080	-0.78	0.9323	-0.0113	-0.82	OE
LXYNF3		0.8320	-0.0020	-0.20	0.9393	-0.0043	-0.31	OE
LZ8ZX4		0.8459	0.0119	1.16	0.9603	0.0167	1.21	OE

		Sample L53			Sample L54			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
MENHU9		0.8380	0.0040	0.39	0.9380	-0.0056	-0.41	IC
MGF3NP		0.8423	0.0083	0.81	0.9623	0.0187	1.36	DR
MT7C7X		0.8325	-0.0015	-0.15	0.9385	-0.0051	-0.37	AE
N7AKJY		0.8343	0.0003	0.03	0.9520	0.0084	0.61	OE
N8HW22		0.8347	0.0007	0.07	0.9597	0.0161	1.17	XX
NA48WU		0.8057	-0.0283	-2.77	0.9167	-0.0269	-1.96	OE
ND7N33		0.8237	-0.0103	-1.01	0.9320	-0.0116	-0.84	IC
NFD7TU		0.8467	0.0127	1.24	0.9500	0.0064	0.46	OE
NFDB3W		0.8306	-0.0034	-0.34	0.9335	-0.0101	-0.74	OE
NH4WZJ		0.8415	0.0075	0.73	0.9573	0.0137	1.00	OE
NQCGWZ		0.8321	-0.0019	-0.19	0.9344	-0.0092	-0.67	OE
NTFXT6		0.8270	-0.0070	-0.68	0.9390	-0.0046	-0.34	XX
P972A9		0.8077	-0.0263	-2.57	0.9180	-0.0256	-1.86	OE
PPXJ8A		0.8268	-0.0072	-0.71	0.9474	0.0038	0.27	AE
PWVT6V	X	0.9033	0.0693	6.78	1.000	0.0564	4.10	GD
PWW6WN		0.8460	0.0120	1.17	0.9547	0.0111	0.80	AE
Q3U7JV		0.8315	-0.0025	-0.25	0.9406	-0.0030	-0.22	OE
Q8QV3N		0.8366	0.0026	0.25	0.9434	-0.0002	-0.01	OE
QDWW8X		0.8333	-0.0007	-0.07	0.9487	0.0051	0.37	IC
QLWWTC	X	0.8240	-0.0100	-0.98	0.8683	-0.0753	-5.48	OE
QN283U		0.8410	0.0070	0.68	0.9633	0.0197	1.44	GD
QTA9YR		0.8305	-0.0035	-0.34	0.9439	0.0003	0.02	OE
R4RPDA		0.8330	-0.0010	-0.10	0.9423	-0.0013	-0.09	OE
R7FLUX		0.8283	-0.0057	-0.55	0.9283	-0.0153	-1.11	OE
R7JLZH		0.8153	-0.0187	-1.83	0.9177	-0.0259	-1.89	OE
R8Q4YE		0.8416	0.0076	0.74	0.9641	0.0205	1.49	OE
R9KR74		0.8483	0.0143	1.40	0.9500	0.0064	0.46	OE
RP7G9W		0.8433	0.0093	0.91	0.9500	0.0064	0.46	OE
RTUNYK		0.8377	0.0037	0.36	0.9533	0.0097	0.71	XX
RU2L4V		0.8237	-0.0103	-1.01	0.9300	-0.0136	-0.99	OE
TK9CW4		0.8537	0.0197	1.92	0.9683	0.0247	1.80	OE
TW84N3		0.8420	0.0080	0.78	0.9523	0.0087	0.63	DR
TYDC7V		0.8213	-0.0127	-1.24	0.9406	-0.0030	-0.22	IC
UBH6XX		0.8271	-0.0069	-0.67	0.9379	-0.0057	-0.42	IC
UC9VRL		0.8253	-0.0088	-0.86	0.9157	-0.0279	-2.03	OE
UTKNQF		0.8320	-0.0020	-0.20	0.9463	0.0027	0.20	OE
VDF3JX		0.8475	0.0135	1.32	0.9484	0.0048	0.35	OE
VDK6FH		0.8403	0.0063	0.62	0.9607	0.0171	1.24	OE
VLEEXT		0.8481	0.0141	1.38	0.9674	0.0238	1.73	OE
VQPGVG		0.8295	-0.0045	-0.44	0.9499	0.0063	0.46	OE
VWFDMM		0.8407	0.0067	0.65	0.9473	0.0037	0.27	OE
WQREUJ		0.8223	-0.0117	-1.14	0.9320	-0.0116	-0.84	OE
WTNEGU		0.8410	0.0070	0.68	0.9467	0.0031	0.22	OE
WXMW6W		0.8461	0.0121	1.18	0.9403	-0.0033	-0.24	OE
WYXDDT		0.8233	-0.0107	-1.04	0.9300	-0.0136	-0.99	XX
X6GNLN		0.8312	-0.0028	-0.27	0.9386	-0.0050	-0.37	OE
X7D3B3		0.8497	0.0157	1.53	0.9740	0.0304	2.21	GD

WebCode	Data Flag	Sample L53 Lab Mean	Sample L53 Diff. from Grand Mean	Sample L53 CPV	Sample L54 Lab Mean	Sample L54 Diff. from Grand Mean	Sample L54 CPV	Method
XDDCNM		0.8202	-0.0138	-1.35	0.9237	-0.0199	-1.45	DR
XJ2LXB		0.8310	-0.0030	-0.29	0.9443	0.0007	0.05	OE
XL4EYV		0.8373	0.0033	0.33	0.9377	-0.0059	-0.43	WD
XXGUP2		0.8277	-0.0063	-0.62	0.9483	0.0047	0.34	OE
XXHGBL		0.8240	-0.0100	-0.98	0.9397	-0.0039	-0.29	IC
Y2DMEP		0.8327	-0.0013	-0.13	0.9420	-0.0016	-0.12	OE
YGQ4CK		0.8310	-0.0030	-0.29	0.9447	0.0011	0.08	OE
YNQ78E		0.8433	0.0093	0.91	0.9533	0.0097	0.71	OE
YPLHDE		0.8180	-0.0160	-1.56	0.9153	-0.0283	-2.06	XX
YTJC8F		0.8323	-0.0017	-0.16	0.9510	0.0074	0.54	OE
YUH43W		0.8265	-0.0075	-0.73	0.9403	-0.0033	-0.24	OE
YUHKBT		0.8390	0.0050	0.49	0.9443	0.0007	0.05	OE
Z69U7T		0.8293	-0.0047	-0.46	0.9360	-0.0076	-0.55	OE
Z7746P		0.8369	0.0029	0.29	0.9490	0.0054	0.39	OE
ZD4CPP		0.8357	0.0017	0.17	0.9340	-0.0096	-0.70	XX

Summary Statistics

	Sample L53		Sample L54	
Grand Means	0.8340	Percent	0.9436	Percent
Stnd Dev Btwn Labs	0.0102	Percent	0.0137	Percent

Samples L53, L54 : AISI 8740 - UNS G87400, AISI 8740 - UNS G87400

Statistics based on 148 of 156 reporting participants

Key to Method Codes Reported by Participants

AE	Spectrometry - Atomic Emission (AES)	DR	Spectrometry - Direct Reading OE (DROES)
GD	Spectrometry - Glow Discharge (GDS)	IC	Spectrometry - Inductively Coupled Plasma (ICP)
OE	Spectrometry - Optical Emission (OES)	WD	X-Ray Fluorescence - Wavelength Dispersive (WDX)
XX	Please Indicate Method Used for Current Element		

Comments on Assigned Data Flags for Test #171

2TCA8L (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample L53.

7YB3J6 (X) - Data for both samples are low.

BXTU6J (X) - Extreme data.

DPWMUH (X) - Data for both samples are high.

JNZ9GY (X) - Data for both samples are high. Inconsistent within the determinations of both samples.

K734WB (X) - Data for sample L53 are low.

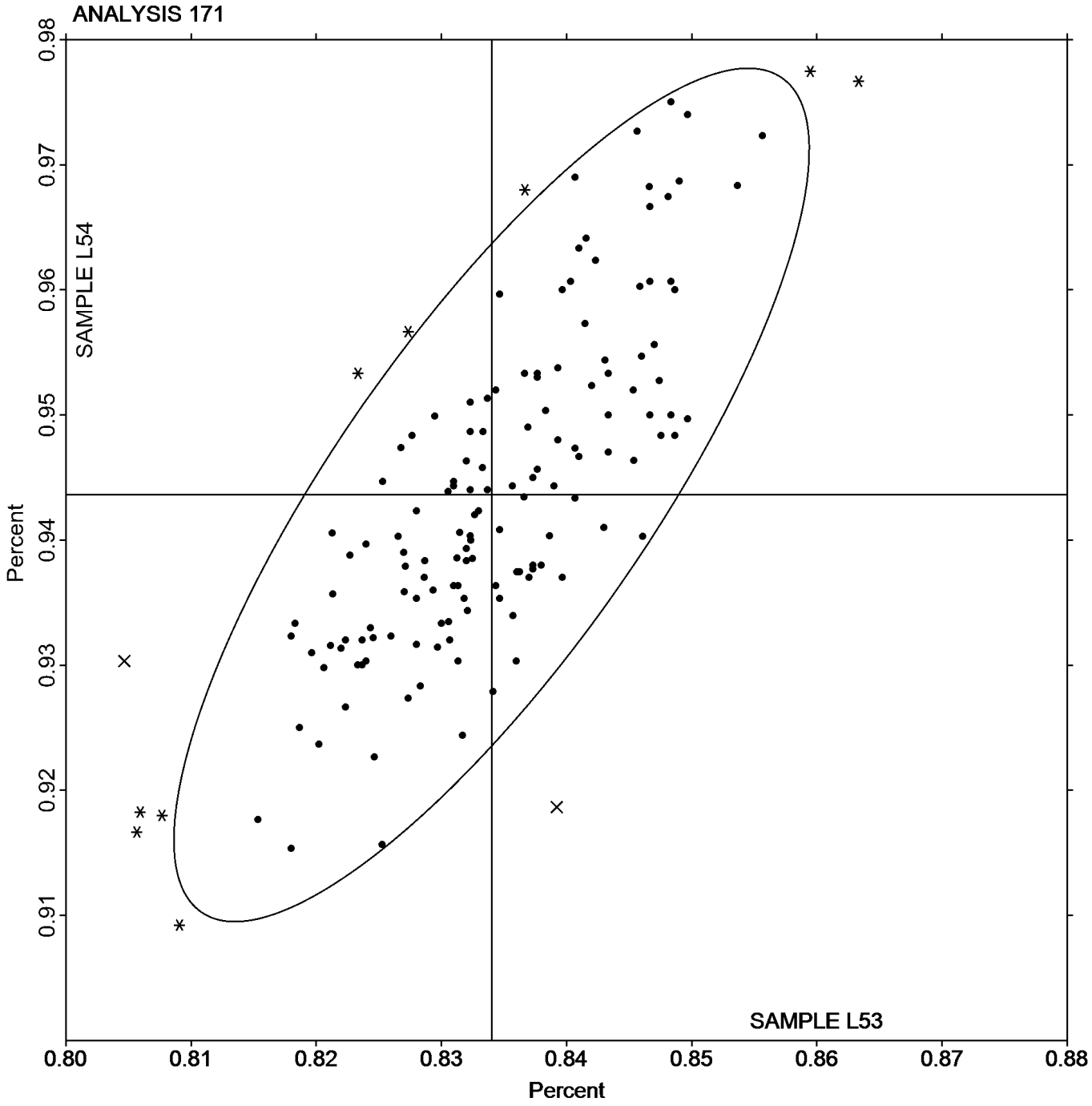
PWVT6V (X) - Data for both samples are high.

QLWWTC (X) - Data for sample L54 are low.

Analysis 171

Carbon & Low Alloy Steel, Element #2
MANGANESE (Mn)

SAMPLE L53	SAMPLE L54
0.8340 Percent	0.9436 Percent



		Sample L53			Sample L54			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
2BBT64		0.0203	-0.0015	-1.01	0.00667	-0.00067	-0.85	OE
2CWLBD		0.0222	0.0004	0.26	0.00703	-0.00030	-0.38	OE
2G2PUK	X	0.0176	-0.0042	-2.94	0.00923	0.00190	2.43	OE
2GL88T	*	0.0188	-0.0030	-2.08	0.00850	0.00117	1.49	OE
2TCA8L		0.0218	0.0000	0.03	0.00690	-0.00043	-0.55	XX
2YKK9T		0.0229	0.0011	0.79	0.00710	-0.00023	-0.30	OE
3489FD		0.0217	-0.0001	-0.09	0.00600	-0.00133	-1.70	OE
3Q6743		0.0228	0.0010	0.68	0.00667	-0.00067	-0.85	OE
47FH9B		0.0230	0.0012	0.84	0.00767	0.00033	0.42	GD
49XXFG		0.0224	0.0006	0.42	0.00713	-0.00020	-0.26	OE
4DFHR3		0.0200	-0.0018	-1.27	0.00697	-0.00037	-0.47	IC
4FFBEF		0.0204	-0.0014	-0.97	0.00818	0.00084	1.08	OE
4KG89G	*	0.0193	-0.0025	-1.71	0.00910	0.00177	2.26	OE
4T3WUA		0.0210	-0.0008	-0.55	0.00633	-0.00100	-1.28	IC
4UG2ZK		0.0218	0.0000	-0.02	0.00747	0.00013	0.17	OE
66GWUA		0.0209	-0.0009	-0.62	0.00723	-0.00010	-0.13	OE
69WXVD		0.0239	0.0021	1.46	0.00693	-0.00040	-0.51	AE
6NWLC8		0.0203	-0.0015	-1.01	0.00700	-0.00033	-0.43	XX
6UUCKB		0.0217	-0.0001	-0.09	0.00667	-0.00067	-0.85	OE
77U9EQ		0.0195	-0.0023	-1.59	0.00780	0.00047	0.60	OE
7YB3J6		0.0206	-0.0012	-0.85	0.00674	-0.00060	-0.76	OE
7ZK8XT		0.0219	0.0001	0.10	0.00663	-0.00070	-0.89	OE
8FAFT7		0.0237	0.0019	1.30	0.00753	0.00020	0.25	OE
8MQ62D	X	0.0288	0.0070	4.89	0.00887	0.00153	1.96	OE
8NM9GG		0.0227	0.0009	0.65	0.00860	0.00127	1.62	XX
94FNBL		0.0213	-0.0005	-0.34	0.00627	-0.00107	-1.36	OE
97HJ3N		0.0212	-0.0006	-0.41	0.00650	-0.00083	-1.06	OE
9D6AQ6		0.0208	-0.0010	-0.71	0.00770	0.00037	0.47	IC
9J6P37		0.0213	-0.0005	-0.32	0.00700	-0.00033	-0.43	OE
9U7RFA		0.0233	0.0015	1.02	0.00813	0.00080	1.02	OE
9X3ZKA		0.0217	-0.0001	-0.09	0.00700	-0.00033	-0.43	OE
ABR4JU		0.0218	0.0000	0.00	0.00653	-0.00080	-1.02	OE
AF3K26		0.0227	0.0009	0.61	0.00790	0.00057	0.72	OE
ANUM47		0.0209	-0.0009	-0.64	0.00720	-0.00013	-0.17	OE
AVZ7KK	X	0.0220	0.0002	0.14	0.0111	0.00373	4.77	OE
AXKNFK		0.0230	0.0012	0.84	0.00700	-0.00033	-0.43	OE
B3A8XK		0.0202	-0.0016	-1.08	0.00797	0.00063	0.81	IC
B7QVUK		0.0218	0.0000	0.00	0.00767	0.00033	0.42	OE
BB3Z4Y		0.0225	0.0007	0.47	0.00770	0.00037	0.47	OE
BE4FTF		0.0210	-0.0008	-0.55	0.00633	-0.00100	-1.28	IC
C2BDRY		0.0251	0.0033	2.30	0.00873	0.00140	1.79	XX
CBJ4CP	X	0.0272	0.0054	3.78	0.0131	0.00573	7.32	OE
DD48L9	X	0.0270	0.0052	3.62	0.00967	0.00233	2.98	XX
DERQGE		0.0221	0.0003	0.21	0.00737	0.00003	0.04	IR
DNHCNX		0.0195	-0.0023	-1.62	0.00727	-0.00007	-0.09	XX
DPBTN8		0.0214	-0.0004	-0.25	0.00846	0.00112	1.43	OE
DPWMUH	X	0.0260	0.0042	2.92	0.0203	0.01300	16.60	OE

		Sample L53			Sample L54			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
DQ8H6N		0.0231	0.0013	0.88	0.00717	-0.00017	-0.21	OE
DURWZJ	X	0.0261	0.0043	2.97	0.00960	0.00227	2.89	OE
EMKAEE	*	0.0245	0.0027	1.88	0.00967	0.00233	2.98	GD
ERWWW6	X	0.0254	0.0036	2.53	0.0115	0.00413	5.28	OE
F3BMA7		0.0207	-0.0011	-0.74	0.00677	-0.00057	-0.72	OE
F7HPMQ	X	0.0207	-0.0011	-0.78	0.0100	0.00267	3.40	AE
F83F7G		0.0218	0.0000	-0.02	0.00817	0.00083	1.06	OE
FHLV9J		0.0233	0.0015	1.07	0.00867	0.00133	1.70	XX
FLPM3H		0.0225	0.0007	0.49	0.00753	0.00020	0.25	OE
FUF98U		0.0197	-0.0021	-1.48	0.00753	0.00020	0.25	OE
FVDTC9	X	0.0157	-0.0061	-4.21	0.00590	-0.00143	-1.83	OE
FX43C2		0.0215	-0.0003	-0.20	0.00647	-0.00087	-1.11	OE
FXL2ND		0.0199	-0.0019	-1.32	0.00640	-0.00093	-1.19	IC
GCGP9C		0.0207	-0.0011	-0.78	0.00767	0.00033	0.42	OE
GCHG6Y		0.0230	0.0012	0.84	0.00857	0.00123	1.57	GD
GEHW8V		0.0227	0.0009	0.61	0.00733	0.00000	0.00	OE
GFGN8H		0.0219	0.0001	0.05	0.00900	0.00167	2.13	WD
GKL4LX		0.0236	0.0018	1.28	0.00737	0.00003	0.04	OE
GN7C3K		0.0215	-0.0003	-0.18	0.00653	-0.00080	-1.02	OE
GRBXWC		0.0231	0.0013	0.91	0.00710	-0.00023	-0.30	OE
GT7WDC		0.0216	-0.0002	-0.16	0.00697	-0.00037	-0.47	OE
GVE4RC		0.0212	-0.0006	-0.41	0.00690	-0.00043	-0.55	OE
GWQ9C2		0.0202	-0.0016	-1.13	0.00637	-0.00097	-1.24	OE
H2VRLE		0.0237	0.0019	1.30	0.00800	0.00067	0.85	OE
HYPF2X		0.0214	-0.0004	-0.25	0.00697	-0.00037	-0.47	OE
J68JCW		0.0216	-0.0002	-0.16	0.00710	-0.00023	-0.30	OE
JDZAR8		0.0216	-0.0002	-0.13	0.00740	0.00007	0.08	OE
JHBTQ7		0.0211	-0.0007	-0.50	0.00743	0.00010	0.13	GD
JNZ9GY		0.0210	-0.0008	-0.55	0.00700	-0.00033	-0.43	IC
JUVQ9W		0.0199	-0.0019	-1.32	0.00550	-0.00183	-2.34	OE
JVHBKN		0.0200	-0.0018	-1.25	0.00633	-0.00100	-1.28	DR
JXTDZZ		0.0229	0.0011	0.77	0.00770	0.00037	0.47	OE
JY4UQT		0.0230	0.0012	0.86	0.00823	0.00090	1.15	OE
K734WB		0.0233	0.0015	1.07	0.00867	0.00133	1.70	GD
KE88UT		0.0238	0.0020	1.36	0.00798	0.00065	0.83	OE
KTUBDC		0.0207	-0.0011	-0.78	0.00733	0.00000	0.00	WD
KWBGMZ		0.0230	0.0012	0.84	0.00833	0.00100	1.28	OE
L238T3		0.0213	-0.0005	-0.32	0.00673	-0.00060	-0.77	OE
L6HXWC		0.0216	-0.0002	-0.11	0.00790	0.00057	0.72	OE
LQ2YYX		0.0235	0.0017	1.17	0.00702	-0.00031	-0.40	OE
LT78VV		0.0229	0.0011	0.78	0.00808	0.00075	0.95	OE
LU7FD9		0.0212	-0.0006	-0.39	0.00747	0.00013	0.17	OE
LXYNF3		0.0193	-0.0025	-1.71	0.00667	-0.00067	-0.85	OE
LZ8ZX4		0.0223	0.0005	0.33	0.00697	-0.00037	-0.47	OE
MENHU9		0.0200	-0.0018	-1.25	0.00860	0.00127	1.62	IC
MGF3NP		0.0210	-0.0008	-0.55	0.00700	-0.00033	-0.43	DR
MT7C7X		0.0252	0.0034	2.37	0.00907	0.00173	2.21	AE

		Sample L53			Sample L54			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
N7AKJY		0.0233	0.0015	1.07	0.00867	0.00133	1.70	XX
N8HW22		0.0223	0.0005	0.38	0.00733	0.00000	0.00	XX
NA48WU		0.0194	-0.0024	-1.64	0.00747	0.00013	0.17	OE
ND7N33		0.0209	-0.0009	-0.60	0.00670	-0.00063	-0.81	IC
NFD7TU		0.0220	0.0002	0.14	0.00700	-0.00033	-0.43	OE
NFDB3W		0.0227	0.0009	0.65	0.00640	-0.00093	-1.19	OE
NH4WZJ		0.0201	-0.0017	-1.18	0.00660	-0.00073	-0.94	OE
NQCGWZ		0.0194	-0.0024	-1.66	0.00623	-0.00110	-1.41	OE
NTFXT6		0.0203	-0.0015	-1.01	0.00733	0.00000	0.00	XX
P972A9		0.0210	-0.0008	-0.53	0.00667	-0.00067	-0.85	OE
PPXJ8A		0.0211	-0.0006	-0.45	0.00707	-0.00026	-0.34	AE
PWVT6V		0.0250	0.0032	2.23	0.00800	0.00067	0.85	GD
PWW6WN		0.0230	0.0012	0.82	0.00733	0.00000	0.00	AE
Q3U7JV		0.0233	0.0015	1.02	0.00713	-0.00020	-0.26	XX
Q8QV3N		0.0194	-0.0024	-1.66	0.00660	-0.00073	-0.94	OE
QDWW8X		0.0212	-0.0006	-0.41	0.00697	-0.00037	-0.47	IC
QN283U		0.0227	0.0009	0.61	0.00800	0.00067	0.85	GD
QTA9YR		0.0196	-0.0022	-1.53	0.00673	-0.00061	-0.78	OE
R4RPDA		0.0235	0.0017	1.16	0.00863	0.00130	1.66	OE
R7FLUX		0.0215	-0.0003	-0.23	0.00627	-0.00107	-1.36	OE
R7JLZH		0.0210	-0.0008	-0.55	0.00773	0.00040	0.51	OE
R8Q4YE		0.0240	0.0022	1.53	0.00777	0.00043	0.55	OE
R9KR74		0.0211	-0.0007	-0.50	0.00813	0.00080	1.02	OE
RP7G9W		0.0200	-0.0018	-1.25	0.00767	0.00033	0.42	OE
RTUNYK		0.0207	-0.0011	-0.78	0.00667	-0.00067	-0.85	XX
RU2L4V		0.0230	0.0012	0.84	0.00800	0.00067	0.85	OE
TK9CW4		0.0212	-0.0006	-0.39	0.00783	0.00050	0.64	OE
TW84N3		0.0223	0.0005	0.38	0.00827	0.00093	1.19	DR
TYDC7V		0.0218	0.0000	0.03	0.00670	-0.00063	-0.81	IC
UBH6XX		0.0211	-0.0007	-0.46	0.00750	0.00017	0.21	IC
UC9VRL		0.0218	0.0000	-0.01	0.00817	0.00084	1.07	OE
UTKNQF		0.0203	-0.0015	-1.01	0.00727	-0.00007	-0.09	OE
VDF3JX		0.0246	0.0028	1.97	0.00860	0.00127	1.62	OE
VDK6FH		0.0197	-0.0021	-1.48	0.00600	-0.00133	-1.70	OE
VLEEXT		0.0216	-0.0002	-0.11	0.00710	-0.00023	-0.30	OE
VQPGVG		0.0220	0.0002	0.12	0.00643	-0.00090	-1.15	OE
VWFDMM	*	0.0239	0.0021	1.46	0.00953	0.00220	2.81	OE
WQREUJ	*	0.0197	-0.0021	-1.48	0.00933	0.00200	2.55	OE
WTNEGU		0.0217	-0.0001	-0.09	0.00700	-0.00033	-0.43	OE
WXMW6W		0.0237	0.0019	1.35	0.00760	0.00027	0.34	OE
WYXDDT		0.0183	-0.0035	-2.40	0.00600	-0.00133	-1.70	XX
X6GNLN		0.0217	-0.0001	-0.04	0.00763	0.00030	0.38	OE
X7D3B3	X	0.0233	0.0015	1.07	0.0100	0.00267	3.40	GD
XDDCNM		0.0219	0.0001	0.05	0.00697	-0.00037	-0.47	DR
XJ2LXB		0.0204	-0.0014	-0.99	0.00677	-0.00057	-0.72	OE
XL4EYV		0.0228	0.0010	0.68	0.00697	-0.00037	-0.47	WD
XXGUP2	X	0.1500	0.1282	89.07	0.1410	0.13367	170.70	OE

WebCode	Data Flag	Sample L53 Lab Mean	Sample L53 Diff. from Grand Mean	Sample L53 CPV	Sample L54 Lab Mean	Sample L54 Diff. from Grand Mean	Sample L54 CPV	Method
XXHGBL		0.0237	0.0019	1.30	0.00733	0.00000	0.00	IC
Y2DMEP		0.0186	-0.0032	-2.20	0.00617	-0.00117	-1.49	OE
YGQ4CK		0.0223	0.0005	0.38	0.00700	-0.00033	-0.43	OE
YNQ78E		0.0257	0.0039	2.69	0.00800	0.00067	0.85	OE
YPLHDE		0.0233	0.0015	1.07	0.00800	0.00067	0.85	XX
YTJC8F		0.0202	-0.0016	-1.11	0.00663	-0.00070	-0.89	OE
YUH43W		0.0223	0.0005	0.32	0.00859	0.00125	1.60	OE
YUHKBT		0.0228	0.0010	0.68	0.00660	-0.00073	-0.94	OE
Z69U7T		0.0227	0.0009	0.61	0.00753	0.00020	0.25	OE
Z7746P		0.0201	-0.0017	-1.20	0.00583	-0.00150	-1.92	OE
ZD4CPP		0.0230	0.0012	0.85	0.00800	0.00067	0.85	XX

Summary Statistics

	Sample L53		Sample L54	
Grand Means	0.0218	Percent	0.00733	Percent
Stnd Dev Btwn Labs	0.0014	Percent	0.00078	Percent

Samples L53, L54 : AISI 8740 - UNS G87400, AISI 8740 - UNS G87400

Statistics based on 137 of 152 reporting participants

Key to Method Codes Reported by Participants

AE	Spectrometry - Atomic Emission (AES)	DR	Spectrometry - Direct Reading OE (DROES)
GD	Spectrometry - Glow Discharge (GDS)	IC	Spectrometry - Inductively Coupled Plasma (ICP)
IR	IR (Absorption / Detection)	OE	Spectrometry - Optical Emission (OES)
WD	X-Ray Fluorescence - Wavelength Dispersive (WDX)	XX	Please Indicate Method Used for Current Element

Comments on Assigned Data Flags for Test #172

2G2PUK (X) - Data for sample L53 are low.

8MQ62D (X) - Data for sample L53 are high.

AVZ7KK (X) - Data for sample L54 are high.

CBJ4CP (X) - Data for both samples are high.

DD48L9 (X) - Data for both samples are high. Inconsistent within the determinations of sample L53.

DPWMUH (X) - Data for both samples are high.

DURWZJ (X) - Data for both samples are high.

ERWWW6 (X) - Data for sample L54 are high.

F7HPMQ (X) - Data for sample L54 are high. Inconsistent within the determinations of sample L54.

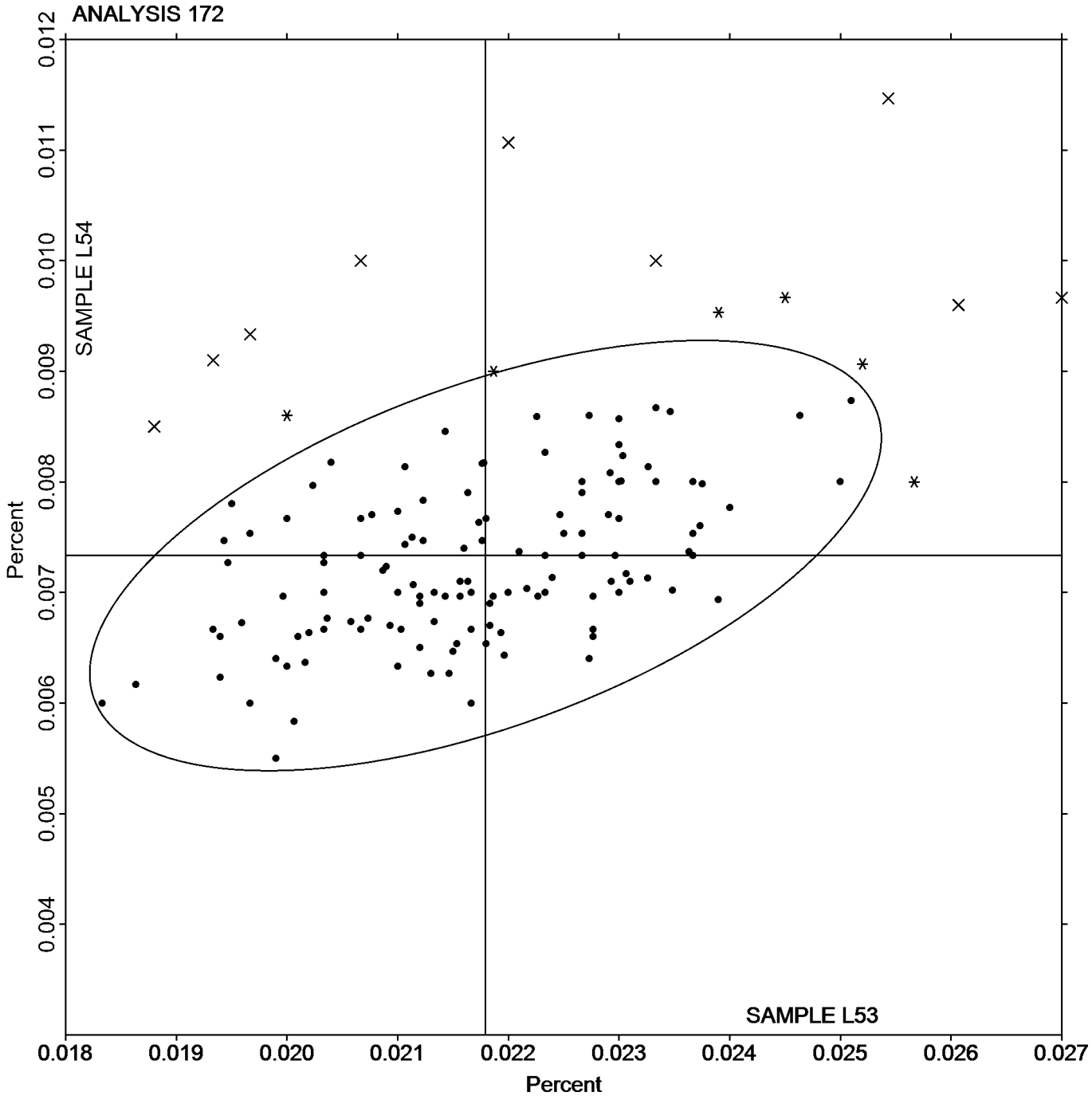
FVDTC9 (X) - Data for sample L53 are low.

X7D3B3 (X) - Data for sample L54 are high. Inconsistent within the determinations of sample L54.

XXGUP2 (X) - Extreme data.

SAMPLE L53
0.0218 Percent

SAMPLE L54
0.00733 Percent



		Sample L53			Sample L54			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
2BBT64		0.0110	0.0009	0.80	0.00367	-0.00013	-0.14	OE
2CWLBD		0.0111	0.0010	0.89	0.00443	0.00064	0.72	OE
2G2PUK	*	0.00957	-0.0005	-0.46	0.00567	0.00187	2.10	OE
2GL88T		0.0129	0.0028	2.47	0.00513	0.00134	1.51	OE
2TCA8L		0.00943	-0.0007	-0.58	0.00340	-0.00039	-0.44	CI
2YKK9T		0.00973	-0.0004	-0.31	0.00337	-0.00043	-0.48	OE
3489FD		0.0100	-0.0001	-0.08	0.00300	-0.00079	-0.89	CO
3Q6743		0.0102	0.0001	0.13	0.00337	-0.00043	-0.48	OE
47FH9B	X	0.0140	0.0039	3.44	0.00900	0.00521	5.85	GD
49XXFG		0.0103	0.0002	0.21	0.00457	0.00077	0.87	OE
4DFHR3		0.0107	0.0006	0.54	0.00377	-0.00003	-0.03	CI
4FFBEF		0.0107	0.0006	0.50	0.00412	0.00032	0.36	OE
4KG89G	X	0.0153	0.0052	4.61	0.00877	0.00497	5.59	OE
4T3WUA		0.0100	-0.0001	-0.08	0.00500	0.00121	1.36	IC
4UG2ZK		0.00970	-0.0004	-0.34	0.00353	-0.00026	-0.29	OE
66GWUA		0.00903	-0.0011	-0.93	0.00340	-0.00039	-0.44	OE
69WXVD		0.0113	0.0012	1.04	0.00427	0.00047	0.53	AE
6NWLC8		0.0117	0.0016	1.39	0.00400	0.00021	0.23	XX
6UUCKB		0.0107	0.0006	0.57	0.00430	0.00051	0.57	OE
77U9EQ		0.0114	0.0013	1.18	0.00437	0.00057	0.64	OE
7YB3J6		0.00769	-0.0024	-2.11	0.00341	-0.00039	-0.44	OE
7ZK8XT		0.0106	0.0005	0.48	0.00377	-0.00003	-0.03	OE
8FAFT7		0.0112	0.0011	0.95	0.00443	0.00064	0.72	OE
8MQ62D		0.0102	0.0001	0.13	0.00373	-0.00006	-0.07	OE
8NM9GG	X	0.0133	0.0032	2.82	0.00857	0.00477	5.36	XX
94FNBL		0.00833	-0.0018	-1.55	0.00300	-0.00079	-0.89	OE
97HJ3N	X	0.0100	-0.0001	-0.08	0.00700	0.00321	3.60	OE
9D6AQ6		0.00913	-0.0010	-0.84	0.00360	-0.00019	-0.22	OE
9J6P37		0.0100	-0.0001	-0.08	0.00333	-0.00046	-0.52	OE
9U7RFA		0.0127	0.0026	2.30	0.00580	0.00201	2.25	OE
9X3ZKA		0.0100	-0.0001	-0.08	0.00367	-0.00013	-0.14	OE
ABR4JU		0.0130	0.0029	2.53	0.00467	0.00087	0.98	OE
AF3K26		0.0101	0.0000	-0.02	0.00427	0.00047	0.53	OE
ANUM47		0.0108	0.0007	0.60	0.00510	0.00131	1.47	OE
AVZ7KK	X	0.0114	0.0013	1.15	0.00753	0.00374	4.20	OE
AXKNFK		0.0103	0.0002	0.21	0.00367	-0.00013	-0.14	OE
B3A8XK		0.00997	-0.0001	-0.11	0.00413	0.00034	0.38	CO
B7QVUK		0.0111	0.0010	0.89	0.00330	-0.00049	-0.56	OE
BB3Z4Y		0.00950	-0.0006	-0.52	0.00357	-0.00023	-0.26	CI
BE4FTF		0.00900	-0.0011	-0.96	0.00300	-0.00079	-0.89	CI
C2BDRY	X	0.0140	0.0039	3.47	0.00703	0.00324	3.64	XX
CBJ4CP		0.0107	0.0006	0.54	0.00413	0.00034	0.38	OE
DD48L9	X	0.00567	-0.0044	-3.89	0.0117	0.00787	8.85	XX
DERQGE		0.00900	-0.0011	-0.96	0.00300	-0.00079	-0.89	CI
DNHCNX		0.00963	-0.0005	-0.40	0.00423	0.00044	0.49	XX
DPBTN8		0.0131	0.0030	2.66	0.00607	0.00227	2.55	OE
DPWMUH	X	0.00767	-0.0024	-2.13	0.00700	0.00321	3.60	OE

		Sample L53			Sample L54			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
DQ8H6N		0.0106	0.0005	0.48	0.00350	-0.00029	-0.33	OE
DURWZJ		0.0107	0.0006	0.54	0.00367	-0.00013	-0.14	OE
EMKAEE		0.0110	0.0009	0.80	0.00383	0.00004	0.04	GD
ERWWW6		0.00963	-0.0005	-0.40	0.00280	-0.00099	-1.12	OE
F3BMA7		0.00997	-0.0001	-0.11	0.00247	-0.00133	-1.49	OE
F7HPMQ		0.00930	-0.0008	-0.69	0.00320	-0.00059	-0.67	CI
F83F7G		0.00967	-0.0004	-0.37	0.00300	-0.00079	-0.89	OE
FHLV9J		0.0117	0.0016	1.39	0.00500	0.00121	1.36	XX
FLPM3H		0.0103	0.0002	0.19	0.00440	0.00061	0.68	IR
FUF98U		0.0103	0.0002	0.19	0.00417	0.00037	0.42	OE
FVDTC9	X	0.0105	0.0004	0.36	0.00653	0.00274	3.08	OE
FX43C2		0.0104	0.0003	0.27	0.00400	0.00021	0.23	OE
FXL2ND		0.00790	-0.0022	-1.93	0.00300	-0.00079	-0.89	CI
GCGP9C		0.00967	-0.0004	-0.37	0.00433	0.00054	0.61	OE
GCHG6Y		0.00997	-0.0001	-0.11	0.00363	-0.00016	-0.18	GD
GEHW8V		0.0110	0.0009	0.80	0.00300	-0.00079	-0.89	OE
GFGN8H		0.00913	-0.0010	-0.84	0.00397	0.00017	0.19	CO
GKL4LX		0.0104	0.0003	0.30	0.00390	0.00011	0.12	OE
GN7C3K		0.00913	-0.0010	-0.84	0.00337	-0.00043	-0.48	CI
GRBXWC		0.0110	0.0009	0.77	0.00353	-0.00026	-0.29	OE
GT7WDC		0.0100	-0.0001	-0.05	0.00340	-0.00039	-0.44	OE
GVE4RC		0.0102	0.0001	0.10	0.00333	-0.00046	-0.52	OE
GWQ9C2		0.00930	-0.0008	-0.69	0.00313	-0.00066	-0.74	OE
H2VRLE		0.0107	0.0006	0.51	0.00433	0.00054	0.61	OE
HYPF2X		0.0102	0.0001	0.13	0.00413	0.00034	0.38	OE
J68JCW		0.00967	-0.0004	-0.37	0.00360	-0.00019	-0.22	OE
JDZAR8		0.00967	-0.0004	-0.37	0.00337	-0.00043	-0.48	CI
JHBTQ7		0.00917	-0.0009	-0.81	0.00287	-0.00093	-1.04	GD
JNZ9GY		0.0107	0.0006	0.51	0.00433	0.00054	0.61	CI
JUVQ9W		0.00933	-0.0008	-0.67	0.00477	0.00097	1.09	OE
JVHBKN		0.0103	0.0002	0.21	0.00400	0.00021	0.23	DR
JXTDZZ		0.0104	0.0003	0.23	0.00462	0.00082	0.92	OE
JY4UQT		0.0112	0.0011	1.01	0.00357	-0.00023	-0.26	OE
K734WB	X	0.0137	0.0036	3.15	0.00800	0.00421	4.73	GD
KE88UT		0.00939	-0.0007	-0.62	0.00178	-0.00201	-2.26	OE
KG2CFN		0.0114	0.0013	1.12	0.00503	0.00124	1.39	OE
KTUBDC		0.00990	-0.0002	-0.17	0.00360	-0.00019	-0.22	CI
KWBGMZ		0.00900	-0.0011	-0.96	0.00400	0.00021	0.23	OE
L238T3		0.00983	-0.0003	-0.23	0.00370	-0.00009	-0.11	OE
L6HXWC		0.0115	0.0014	1.21	0.00467	0.00087	0.98	OE
LQ2YYX		0.0122	0.0021	1.89	0.00449	0.00069	0.78	OE
LT78VV		0.0109	0.0008	0.74	0.00598	0.00219	2.46	CI
LU7FD9		0.00993	-0.0002	-0.14	0.00427	0.00047	0.53	OE
LXYNF3	X	0.00633	-0.0038	-3.31	0.00200	-0.00179	-2.02	XX
LZ8ZX4		0.00910	-0.0010	-0.87	0.00327	-0.00053	-0.59	OE
MENHU9		0.0100	-0.0001	-0.08	0.00410	0.00031	0.34	CI
MGF3NP		0.00967	-0.0004	-0.37	0.00400	0.00021	0.23	DR

		Sample L53			Sample L54			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
MT7C7X		0.0101	0.0000	0.04	0.00383	0.00004	0.04	AE
N7AKJY		0.0103	0.0002	0.21	0.00333	-0.00046	-0.52	XX
N8HW22		0.00833	-0.0018	-1.55	0.00233	-0.00146	-1.64	XX
NA48WU		0.00970	-0.0004	-0.34	0.00407	0.00027	0.31	OE
ND7N33		0.00940	-0.0007	-0.61	0.00367	-0.00013	-0.14	CI
NFD7TU		0.00967	-0.0004	-0.37	0.00367	-0.00013	-0.14	OE
NFDB3W		0.0110	0.0009	0.83	0.00393	0.00014	0.16	OE
NH4WZJ		0.0102	0.0001	0.10	0.00370	-0.00009	-0.11	OE
NQCGWZ	*	0.00683	-0.0033	-2.87	0.00180	-0.00199	-2.24	OE
NTFXT6	X	0.00700	-0.0031	-2.72	0.00100	-0.00279	-3.14	XX
P972A9		0.00903	-0.0011	-0.93	0.00317	-0.00063	-0.71	CI
PPXJ8A		0.00879	-0.0013	-1.15	0.00356	-0.00024	-0.27	AE
PWVT6V	*	0.0120	0.0019	1.68	0.00300	-0.00079	-0.89	GD
PWW6WN		0.00993	-0.0002	-0.14	0.00440	0.00061	0.68	CI
Q3U7JV		0.00874	-0.0014	-1.19	0.00283	-0.00097	-1.09	OE
Q8QV3N	X	0.0369	0.0268	23.59	0.0193	0.01547	17.39	OE
QDWW8X		0.00943	-0.0007	-0.58	0.00337	-0.00043	-0.48	CI
QN283U	*	0.00823	-0.0019	-1.63	0.00123	-0.00256	-2.88	GD
QTA9YR		0.00863	-0.0015	-1.29	0.00335	-0.00044	-0.50	OE
R4RPDA	*	0.00823	-0.0019	-1.63	0.00117	-0.00263	-2.95	OE
R7FLUX		0.0102	0.0001	0.07	0.00337	-0.00043	-0.48	CO
R7JLZH		0.00937	-0.0007	-0.64	0.00347	-0.00033	-0.37	OE
R8Q4YE	X	0.0134	0.0033	2.91	0.00417	0.00037	0.42	OE
R9KR74		0.0116	0.0015	1.36	0.00417	0.00037	0.42	OE
RP7G9W		0.00833	-0.0018	-1.55	0.00367	-0.00013	-0.14	OE
RTUNYK	*	0.0117	0.0016	1.39	0.00633	0.00254	2.85	XX
RU2L4V		0.00867	-0.0014	-1.25	0.00200	-0.00179	-2.02	CI
TK9CW4		0.00923	-0.0009	-0.75	0.00387	0.00007	0.08	OE
TYDC7V		0.0106	0.0005	0.45	0.00517	0.00137	1.54	CO
UBH6XX		0.00900	-0.0011	-0.96	0.00363	-0.00016	-0.18	CI
UC9VRL		0.0111	0.0010	0.86	0.00454	0.00074	0.83	OE
UTKNQF		0.00990	-0.0002	-0.17	0.00410	0.00031	0.34	OE
VDF3JX		0.0125	0.0024	2.15	0.00517	0.00137	1.54	OE
VDK6FH		0.00900	-0.0011	-0.96	0.00333	-0.00046	-0.52	OE
VLEEXT		0.00990	-0.0002	-0.17	0.00433	0.00054	0.61	OE
VQPGVG		0.0112	0.0011	0.98	0.00390	0.00011	0.12	OE
VWFDMM		0.00997	-0.0001	-0.11	0.00287	-0.00093	-1.04	OE
WQREUJ	X	0.0143	0.0042	3.73	0.00933	0.00554	6.23	OE
WTNEGU		0.00867	-0.0014	-1.25	0.00200	-0.00179	-2.02	OE
WXMW6W		0.00990	-0.0002	-0.17	0.00227	-0.00153	-1.72	OE
WYXDDT	X	0.00633	-0.0038	-3.31	0.0143	0.01054	11.84	XX
X6GNLN		0.00993	-0.0002	-0.14	0.00380	0.00001	0.01	CI
X7D3B3		0.00967	-0.0004	-0.37	0.00400	0.00021	0.23	GD
XDDCNM		0.0106	0.0005	0.45	0.00557	0.00177	1.99	CO
XJ2LXB		0.00880	-0.0013	-1.13	0.00390	0.00011	0.12	OE
XL4EYV		0.00947	-0.0006	-0.55	0.00340	-0.00039	-0.44	CI
XXGUP2	X	0.0353	0.0252	22.18	0.0276	0.02377	26.72	OE

Fasteners and Metals Interlaboratory Testing Program

Analysis 173

Carbon & Low Alloy Steel, Element #4

SULFUR (S)

Cycle 123
3rd Qtr 2018

		Sample L53			Sample L54			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
XXHGBL		0.0103	0.0002	0.19	0.00463	0.00084	0.94	CI
Y2DMEP		0.00700	-0.0031	-2.72	0.00190	-0.00189	-2.13	OE
YGQ4CK		0.0107	0.0006	0.51	0.00400	0.00021	0.23	OE
YNQ78E		0.0123	0.0022	1.97	0.00433	0.00054	0.61	OE
YPLHDE		0.0117	0.0016	1.39	0.00367	-0.00013	-0.14	XX
YTJC8F	M	0.0115	0.0014	1.21	No Data Reported			OE
YUH43W		0.0116	0.0015	1.36	0.00562	0.00183	2.05	OE
YUHKBT		0.00893	-0.0012	-1.02	0.00323	-0.00056	-0.63	OE
Z69U7T	X	0.0136	0.0035	3.09	0.00387	0.00007	0.08	OE
Z7746P		0.0107	0.0006	0.57	0.00373	-0.00006	-0.07	OE
ZD4CPP		0.0112	0.0011	0.94	0.00500	0.00121	1.36	XX

Summary Statistics

	Sample L53		Sample L54	
Grand Means	0.0101	Percent	0.00379	Percent
Stnd Dev Btwn Labs	0.0011	Percent	0.00089	Percent

Samples L53, L54 : AISI 8740 - UNS G87400, AISI 8740 - UNS G87400

Statistics based on 131 of 152 reporting participants

Key to Method Codes Reported by Participants

AE	Spectrometry - Atomic Emission (AES)	CI	Combustion / IR
CO	Combustion	DR	Spectrometry - Direct Reading OE (DROES)
GD	Spectrometry - Glow Discharge (GDS)	IC	Spectrometry - Inductively Coupled Plasma (ICP)
IR	IR (Absorption / Detection)	OE	Spectrometry - Optical Emission (OES)
XX	Please Indicate Method Used for Current Element		

Comments on Assigned Data Flags for Test #173

47FH9B (X) - Data for both samples are high. Inconsistent within the determinations of sample L54.

4KG89G (X) - Data for both samples are high.

8NM9GG (X) - Data for both samples are high.

97HJ3N (X) - Data for sample L54 are high.

AVZ7KK (X) - Data for sample L54 are high. Inconsistent within the determinations of sample L54.

C2BDRY (X) - Data for both samples are high. Inconsistent within the determinations of sample L54.

DD48L9 (X) - Data for sample L53 are low and data for sample L54 are high. Inconsistent within the determinations of sample L54.

DPWMUH (X) - Data for sample L54 are high. Inconsistent within the determinations of sample L54.

FVDTC9 (X) - Data for sample L54 are high.

K734WB (X) - Data for both samples are high. Inconsistent within the determinations of sample L54.

LXYNF3 (X) - Data for sample L53 are low.

NTFXT6 (X) - Data for sample L54 are low.

Q8QV3N (X) - Extreme data.

R8Q4YE (X) - Data for sample L53 are high.

WQREUJ (X) - Data for both samples are high.

WYXDDT (X) - Data for sample L53 are low and data for sample L54 are high.

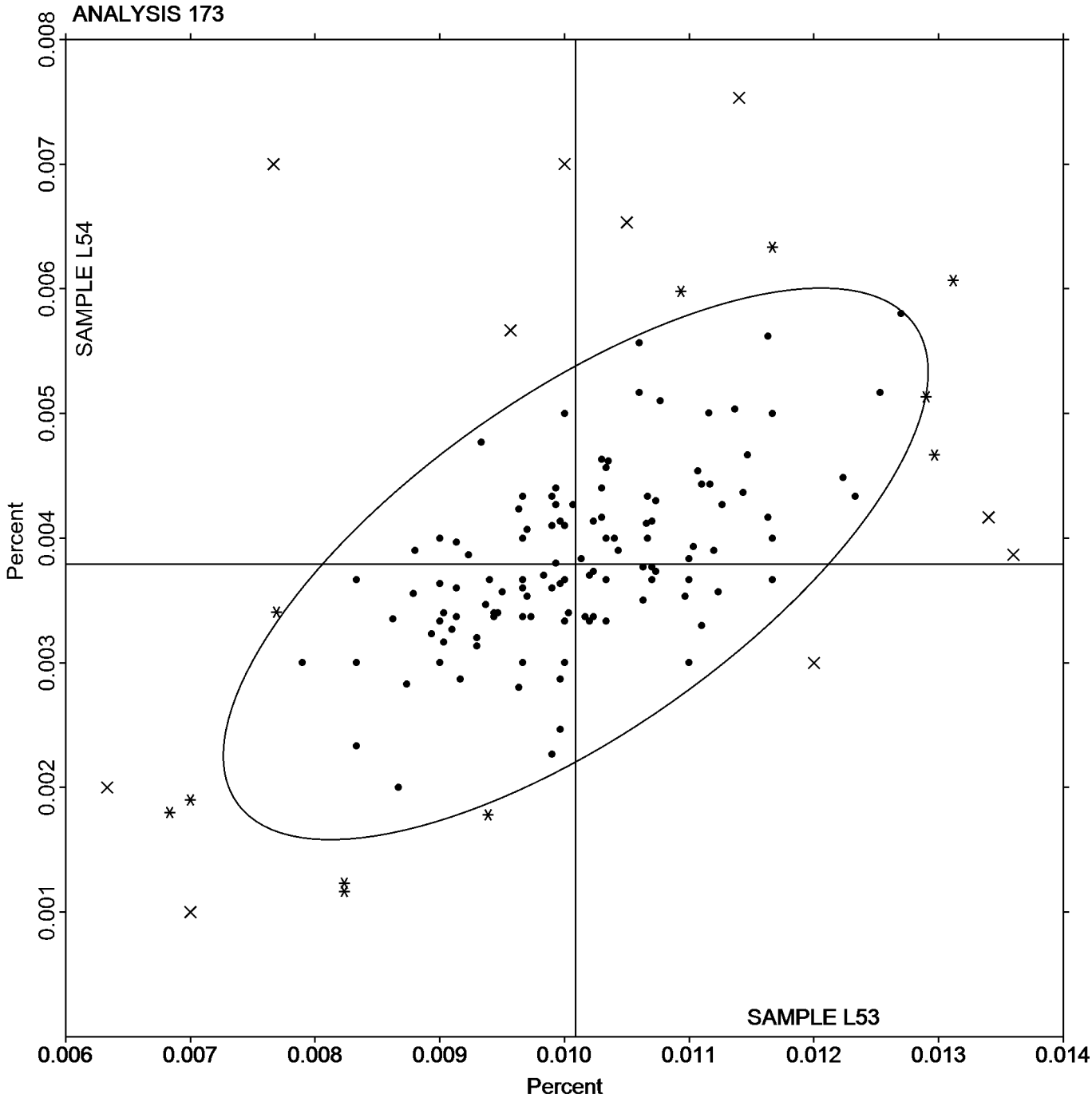
XXGUP2 (X) - Extreme data.

YTJC8F (M) - Participant did not submit data for sample L54.

Z69U7T (X) - Data for sample L53 are high.

SAMPLE L53
0.0101 Percent

SAMPLE L54
0.00379 Percent



		Sample L53			Sample L54			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
2BBT64		0.2467	0.0079	1.57	0.3033	0.0096	1.50	OE
2CWLBD		0.2390	0.0002	0.05	0.2963	0.0026	0.41	OE
2G2PUK		0.2383	-0.0004	-0.08	0.2927	-0.0010	-0.16	OE
2GL88T		0.2283	-0.0104	-2.07	0.2813	-0.0124	-1.93	OE
2NZULB		0.2357	-0.0031	-0.61	0.2851	-0.0086	-1.35	WD
2TCA8L		0.2406	0.0018	0.37	0.2963	0.0026	0.40	OE
2YKK9T		0.2367	-0.0021	-0.42	0.2931	-0.0006	-0.10	OE
3489FD		0.2383	-0.0004	-0.08	0.2907	-0.0030	-0.48	OE
3Q6743		0.2386	-0.0001	-0.02	0.2963	0.0026	0.40	OE
47FH9B		0.2383	-0.0004	-0.08	0.3030	0.0093	1.45	GD
49XXFG		0.2380	-0.0008	-0.15	0.2917	-0.0020	-0.32	OE
4DFHR3		0.2419	0.0032	0.63	0.2977	0.0040	0.63	IC
4FFBEF		0.2450	0.0062	1.24	0.3017	0.0080	1.24	OE
4KG89G		0.2370	-0.0018	-0.35	0.2857	-0.0080	-1.26	OE
4T3WUA		0.2400	0.0012	0.25	0.2967	0.0030	0.46	IC
4UG2ZK		0.2421	0.0034	0.67	0.3040	0.0103	1.61	OE
66GWUA		0.2390	0.0002	0.05	0.2943	0.0006	0.10	OE
69WXVD		0.2433	0.0046	0.91	0.2960	0.0023	0.36	AE
6NWLC8		0.2343	-0.0044	-0.88	0.2943	0.0006	0.10	XX
6UUCKB		0.2400	0.0012	0.25	0.2920	-0.0017	-0.27	OE
77U9EQ		0.2383	-0.0004	-0.08	0.2963	0.0026	0.41	OE
7YB3J6	*	0.2260	-0.0128	-2.54	0.2953	0.0016	0.24	OE
7ZK8XT		0.2426	0.0039	0.77	0.2983	0.0046	0.72	OE
8FAFT7		0.2443	0.0056	1.11	0.2993	0.0056	0.88	OE
8MQ62D		0.2371	-0.0016	-0.32	0.2920	-0.0017	-0.26	OE
8NM9GG		0.2403	0.0016	0.31	0.2956	0.0019	0.29	XX
94FNBL		0.2393	0.0006	0.11	0.2933	-0.0004	-0.06	OE
97HJ3N		0.2375	-0.0013	-0.25	0.2893	-0.0044	-0.69	OE
9D6AQ6	*	0.2467	0.0079	1.57	0.2910	-0.0027	-0.42	IC
9J6P37		0.2267	-0.0121	-2.41	0.2833	-0.0104	-1.62	OE
9U7RFA		0.2390	0.0002	0.05	0.2913	-0.0024	-0.37	OE
9X3ZKA		0.2353	-0.0034	-0.68	0.2897	-0.0040	-0.63	OE
ABR4JU		0.2327	-0.0061	-1.21	0.2863	-0.0074	-1.15	OE
AF3K26		0.2343	-0.0044	-0.88	0.2843	-0.0094	-1.46	OE
ANUM47		0.2313	-0.0074	-1.48	0.2887	-0.0050	-0.79	OE
AVZ7KK		0.2397	0.0009	0.19	0.3034	0.0097	1.51	OE
AXKNFK	*	0.2457	0.0069	1.38	0.2890	-0.0047	-0.74	OE
B3A8XK		0.2427	0.0039	0.78	0.2950	0.0013	0.20	IC
B7QVUK		0.2388	0.0001	0.02	0.2955	0.0018	0.27	OE
BB3Z4Y		0.2403	0.0016	0.31	0.2997	0.0060	0.93	OE
BE4FTF		0.2433	0.0046	0.91	0.2963	0.0026	0.41	IC
C2BDRY		0.2417	0.0029	0.58	0.2883	-0.0054	-0.84	XX
CBJ4CP		0.2353	-0.0034	-0.68	0.2973	0.0036	0.57	OE
DD48L9		0.2410	0.0022	0.45	0.2977	0.0040	0.62	XX
DERQGE		0.2403	0.0016	0.31	0.2917	-0.0020	-0.32	IR
DNHCNX		0.2330	-0.0058	-1.15	0.2911	-0.0026	-0.41	XX
DPBTN8		0.2429	0.0041	0.82	0.2987	0.0050	0.78	OE

		Sample L53			Sample L54			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
DPWMUH	X	0.2927	0.0539	10.73	0.3047	0.0110	1.71	OE
DQ8H6N		0.2433	0.0046	0.91	0.2967	0.0030	0.46	OE
DURWZJ		0.2413	0.0026	0.51	0.2970	0.0033	0.51	OE
EMKAEE		0.2427	0.0039	0.78	0.2983	0.0046	0.72	GD
ERWWW6		0.2355	-0.0033	-0.65	0.2883	-0.0054	-0.85	OE
F3BMA7		0.2332	-0.0056	-1.11	0.2898	-0.0039	-0.61	OE
F7HPMQ		0.2397	0.0009	0.18	0.2907	-0.0030	-0.48	AE
F83F7G		0.2367	-0.0021	-0.42	0.2877	-0.0060	-0.94	OE
FHLV9J		0.2420	0.0032	0.65	0.2967	0.0030	0.46	XX
FLPM3H		0.2430	0.0042	0.84	0.2983	0.0046	0.72	OE
FUF98U	*	0.2415	0.0027	0.54	0.2791	-0.0146	-2.28	OE
FVDTC9		0.2477	0.0089	1.77	0.3030	0.0093	1.45	OE
FX43C2		0.2343	-0.0044	-0.88	0.2887	-0.0050	-0.79	OE
FXL2ND		0.2362	-0.0025	-0.50	0.2921	-0.0016	-0.26	IC
GCGP9C		0.2367	-0.0021	-0.42	0.2840	-0.0097	-1.52	OE
GCHG6Y		0.2490	0.0102	2.04	0.3060	0.0123	1.92	GD
GEHW8V		0.2417	0.0029	0.58	0.2987	0.0050	0.77	OE
GFGN8H		0.2361	-0.0026	-0.52	0.2906	-0.0031	-0.49	OE
GKL4LX		0.2270	-0.0118	-2.34	0.2783	-0.0154	-2.40	OE
GN7C3K		0.2366	-0.0021	-0.42	0.2908	-0.0029	-0.46	OE
GRBXWC		0.2340	-0.0048	-0.95	0.2880	-0.0057	-0.89	OE
GT7WDC		0.2433	0.0046	0.91	0.3000	0.0063	0.98	OE
GVE4RC		0.2416	0.0028	0.56	0.2974	0.0037	0.58	OE
GWQ9C2		0.2313	-0.0074	-1.48	0.2793	-0.0144	-2.25	OE
H2VRLE		0.2407	0.0019	0.38	0.2990	0.0053	0.83	OE
HYPF2X		0.2365	-0.0022	-0.44	0.2915	-0.0022	-0.35	OE
J68JCW		0.2383	-0.0004	-0.08	0.2917	-0.0020	-0.32	OE
JDZAR8		0.2370	-0.0018	-0.35	0.2850	-0.0087	-1.36	OE
JHBTQ7		0.2433	0.0046	0.91	0.2940	0.0003	0.04	GD
JNZ9GY		0.2380	-0.0008	-0.15	0.2890	-0.0047	-0.74	IC
JUVQ9W		0.2350	-0.0038	-0.75	0.2927	-0.0010	-0.16	OE
JVHBKN		0.2353	-0.0034	-0.68	0.2883	-0.0054	-0.84	DR
JXTDZZ		0.2371	-0.0017	-0.33	0.2895	-0.0042	-0.65	OE
JY4UQT		0.2393	0.0006	0.11	0.2925	-0.0012	-0.19	OE
K734WB		0.2503	0.0116	2.30	0.3077	0.0140	2.18	GD
KE88UT	X	0.2580	0.0192	3.83	0.3144	0.0207	3.23	OE
KG2CFN		0.2517	0.0129	2.57	0.3073	0.0136	2.13	OE
KTUBDC		0.2307	-0.0081	-1.61	0.2850	-0.0087	-1.36	WD
KWBGMZ		0.2257	-0.0131	-2.60	0.2773	-0.0164	-2.56	OE
L238T3		0.2383	-0.0005	-0.10	0.2967	0.0030	0.46	OE
L6HXWC		0.2380	-0.0008	-0.15	0.2977	0.0040	0.62	OE
LQ2YYX		0.2315	-0.0072	-1.44	0.2819	-0.0118	-1.85	OE
LT78VV		0.2407	0.0019	0.38	0.3028	0.0091	1.42	OE
LU7FD9		0.2343	-0.0044	-0.88	0.2853	-0.0084	-1.31	OE
LXYNF3		0.2370	-0.0018	-0.35	0.2907	-0.0030	-0.48	OE
LZ8ZX4		0.2389	0.0001	0.03	0.2942	0.0005	0.08	OE
MENHU9	*	0.2480	0.0092	1.84	0.2887	-0.0050	-0.79	IC

		Sample L53			Sample L54			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
MGF3NP		0.2413	0.0026	0.51	0.2993	0.0056	0.88	DR
MT7C7X		0.2488	0.0101	2.01	0.3066	0.0129	2.01	AE
N7AKJY		0.2340	-0.0048	-0.95	0.2900	-0.0037	-0.58	XX
N8HW22		0.2310	-0.0078	-1.54	0.2913	-0.0024	-0.37	XX
NA48WU		0.2463	0.0076	1.51	0.3073	0.0136	2.13	OE
ND7N33		0.2363	-0.0024	-0.48	0.2920	-0.0017	-0.27	IC
NFD7TU		0.2333	-0.0054	-1.08	0.2900	-0.0037	-0.58	OE
NFDB3W		0.2337	-0.0050	-1.00	0.2865	-0.0072	-1.12	OE
NH4WZJ		0.2461	0.0074	1.47	0.3040	0.0103	1.61	OE
NQCGWZ		0.2379	-0.0009	-0.18	0.2882	-0.0055	-0.86	OE
NTFXT6		0.2360	-0.0028	-0.55	0.2917	-0.0020	-0.32	XX
P972A9		0.2387	-0.0001	-0.02	0.2930	-0.0007	-0.11	OE
PPXJ8A		0.2269	-0.0119	-2.36	0.2815	-0.0122	-1.91	AE
PWVT6V	X	0.3533	0.1146	22.80	0.3033	0.0096	1.50	GD
PWW6WN		0.2403	0.0016	0.31	0.2973	0.0036	0.57	AE
Q3U7JV		0.2382	-0.0006	-0.12	0.2925	-0.0012	-0.18	OE
Q8QV3N		0.2422	0.0034	0.69	0.2986	0.0049	0.76	OE
QDWW8X		0.2397	0.0009	0.18	0.2947	0.0010	0.15	IC
QLWWTC	X	0.2440	0.0052	1.04	0.2510	-0.0427	-6.67	OE
QN283U		0.2407	0.0019	0.38	0.2957	0.0020	0.31	GD
QTA9YR	X	0.2095	-0.0292	-5.82	0.2626	-0.0311	-4.86	OE
R4RPDA		0.2397	0.0009	0.18	0.2917	-0.0020	-0.32	OE
R7FLUX		0.2347	-0.0041	-0.81	0.2877	-0.0060	-0.94	OE
R7JLZH		0.2450	0.0062	1.24	0.2973	0.0036	0.57	OE
R8Q4YE		0.2340	-0.0048	-0.95	0.2913	-0.0024	-0.37	OE
R9KR74		0.2410	0.0022	0.45	0.2927	-0.0010	-0.16	OE
RP7G9W		0.2400	0.0012	0.25	0.2967	0.0030	0.46	OE
RTUNYK		0.2343	-0.0044	-0.88	0.2930	-0.0007	-0.11	XX
RU2L4V		0.2433	0.0046	0.91	0.2977	0.0040	0.62	OE
TK9CW4	*	0.2247	-0.0141	-2.80	0.2780	-0.0157	-2.45	OE
TW84N3		0.2457	0.0069	1.38	0.2990	0.0053	0.83	DR
TYDC7V		0.2377	-0.0010	-0.20	0.2967	0.0030	0.46	IC
UBH6XX		0.2446	0.0059	1.17	0.2984	0.0047	0.73	GR
UC9VRL		0.2396	0.0008	0.16	0.2933	-0.0004	-0.06	OE
UTKNQF		0.2337	-0.0051	-1.01	0.2887	-0.0050	-0.79	OE
VDF3JX		0.2466	0.0079	1.57	0.3024	0.0087	1.36	OE
VDK6FH		0.2387	-0.0001	-0.02	0.2973	0.0036	0.57	OE
VLEEXT		0.2412	0.0025	0.49	0.2987	0.0050	0.78	OE
VQPGVG		0.2418	0.0030	0.60	0.3007	0.0070	1.09	OE
VWFDMM		0.2430	0.0042	0.84	0.2973	0.0036	0.57	OE
WQREUJ	*	0.2477	0.0089	1.77	0.2907	-0.0030	-0.48	OE
WTNEGU		0.2420	0.0032	0.65	0.3007	0.0070	1.09	OE
WXMW6W	*	0.2493	0.0105	2.09	0.2967	0.0030	0.47	OE
X6GNLN		0.2383	-0.0005	-0.09	0.2928	-0.0009	-0.14	OE
X7D3B3	*	0.2530	0.0142	2.83	0.3110	0.0173	2.70	GD
XDDCNM		0.2367	-0.0021	-0.42	0.2847	-0.0090	-1.41	DR
XJ2LXB		0.2297	-0.0091	-1.81	0.2837	-0.0100	-1.57	OE

Fasteners and Metals Interlaboratory Testing Program

Analysis 174

Carbon & Low Alloy Steel, Element #5
SILICON (Si)

Cycle 123
3rd Qtr 2018

WebCode	Data Flag	Sample L53 Lab Mean	Sample L53 Diff. from Grand Mean	Sample L53 CPV	Sample L54 Lab Mean	Sample L54 Diff. from Grand Mean	Sample L54 CPV	Method
XL4EYV		0.2430	0.0042	0.84	0.2907	-0.0030	-0.48	WD
XXGUP2	X	0.2477	0.0089	1.77	0.3217	0.0280	4.37	OE
XXHGBL		0.2393	0.0006	0.11	0.2970	0.0033	0.51	IC
Y2DMEP		0.2360	-0.0028	-0.55	0.2897	-0.0040	-0.63	OE
YGQ4CK		0.2347	-0.0041	-0.81	0.2903	-0.0034	-0.53	OE
YNQ78E		0.2433	0.0046	0.91	0.2987	0.0050	0.77	OE
YPLHDE		0.2397	0.0009	0.18	0.2893	-0.0044	-0.68	XX
YTJC8F		0.2350	-0.0038	-0.75	0.2920	-0.0017	-0.27	OE
YUH43W		0.2387	0.0000	-0.01	0.2946	0.0009	0.14	OE
YUHKBT		0.2463	0.0076	1.51	0.2987	0.0050	0.77	OE
Z69U7T		0.2357	-0.0031	-0.61	0.2957	0.0020	0.31	OE
Z7746P		0.2419	0.0031	0.62	0.2991	0.0054	0.85	OE
ZD4CPP		0.2408	0.0020	0.40	0.2914	-0.0024	-0.37	XX

Summary Statistics

	Sample L53		Sample L54	
Grand Means	0.2388	Percent	0.2937	Percent
Stnd Dev Btwn Labs	0.0050	Percent	0.0064	Percent

Samples L53, L54 : AISI 8740 - UNS G87400, AISI 8740 - UNS G87400

Statistics based on 141 of 154 reporting participants

Key to Method Codes Reported by Participants

AE	Spectrometry - Atomic Emission (AES)	DR	Spectrometry - Direct Reading OE (DROES)
GD	Spectrometry - Glow Discharge (GDS)	GR	Gravimetry
IC	Spectrometry - Inductively Coupled Plasma (ICP)	IR	IR (Absorption / Detection)
OE	Spectrometry - Optical Emission (OES)	WD	X-Ray Fluorescence - Wavelength Dispersive (WDX)
XX	Please Indicate Method Used for Current Element		

Comments on Assigned Data Flags for Test #174

DPWMUH (X) - Data for sample L53 are high.

KE88UT (X) - Data for both samples are high.

PWVT6V (X) - Data for sample L53 are high.

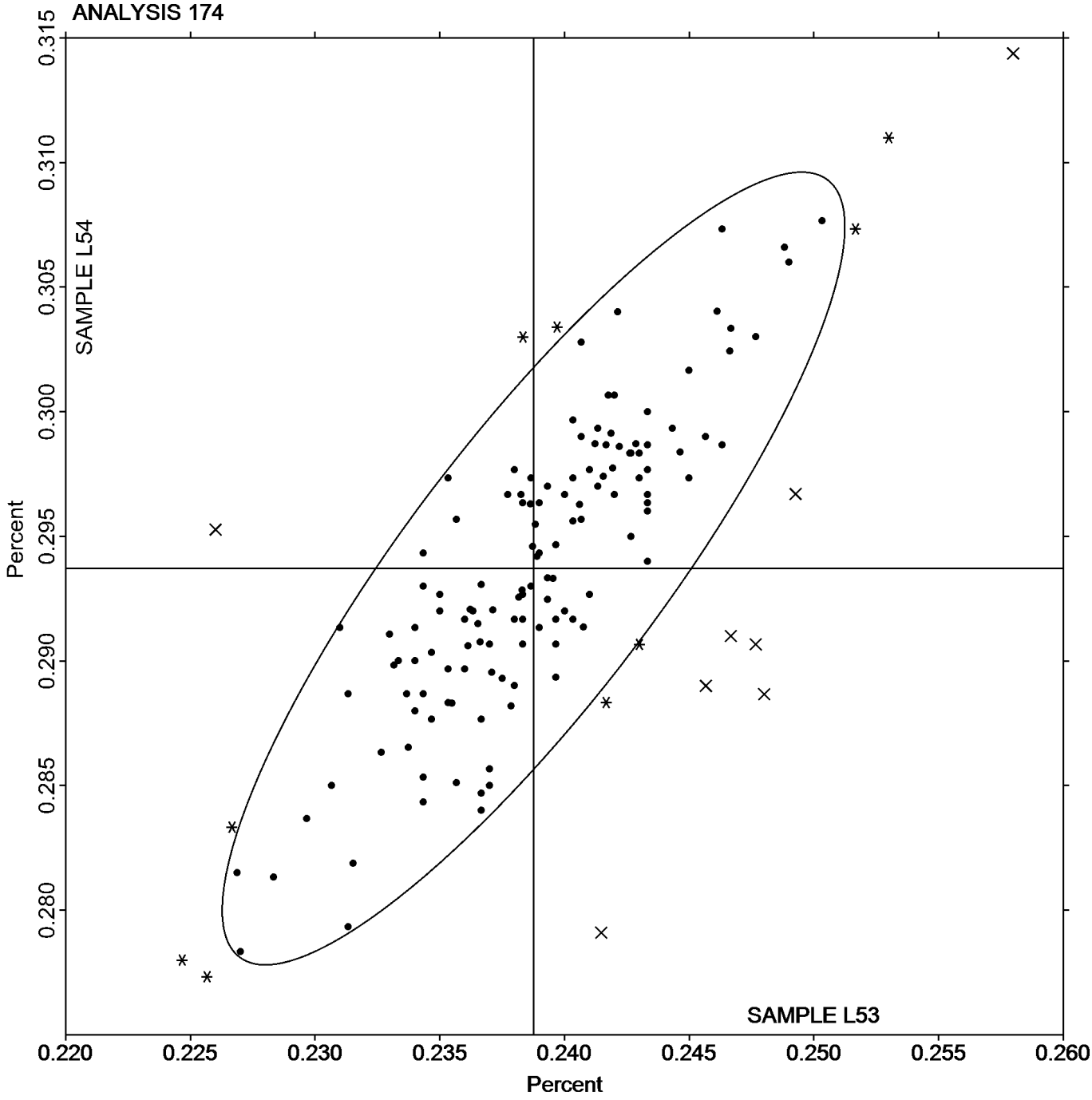
QLWWTC (X) - Data for sample L54 are low.

QTA9YR (X) - Data for both samples are low.

XXGUP2 (X) - Data for sample L54 are high.

SAMPLE L53
0.2388 Percent

SAMPLE L54
0.2937 Percent



		Sample L53			Sample L54			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
2BBT64		0.2200	0.0107	2.05	0.2300	0.0049	0.92	OE
2CWLBD		0.2103	0.0010	0.19	0.2243	-0.0008	-0.14	OE
2G2PUK	*	0.2253	0.0160	3.07	0.2400	0.0149	2.78	XX
2GL88T		0.1987	-0.0107	-2.05	0.2143	-0.0108	-2.01	OE
2NZULB		0.2157	0.0064	1.23	0.2301	0.0050	0.93	WD
2TCA8L		0.2114	0.0021	0.39	0.2254	0.0003	0.05	OE
2YKK9T		0.2092	-0.0001	-0.02	0.2245	-0.0006	-0.12	OE
3489FD		0.2073	-0.0020	-0.39	0.2233	-0.0018	-0.33	OE
3Q6743		0.2086	-0.0007	-0.14	0.2236	-0.0015	-0.28	OE
47FH9B		0.2110	0.0017	0.32	0.2323	0.0072	1.35	GD
49XXFG		0.2127	0.0033	0.64	0.2273	0.0022	0.42	OE
4DFHR3	*	0.2129	0.0035	0.68	0.2222	-0.0029	-0.55	IC
4FFBEF		0.2077	-0.0017	-0.32	0.2220	-0.0031	-0.58	OE
4KG89G		0.2173	0.0080	1.53	0.2330	0.0079	1.48	OE
4T3WUA		0.2067	-0.0027	-0.51	0.2200	-0.0051	-0.95	IC
4UG2ZK		0.2061	-0.0032	-0.62	0.2238	-0.0013	-0.24	OE
66GWUA		0.2063	-0.0030	-0.58	0.2230	-0.0021	-0.39	OE
69WXVD	X	0.2077	-0.0017	-0.32	0.2140	-0.0111	-2.07	AE
6NWLC8	X	0.1843	-0.0250	-4.81	0.2013	-0.0238	-4.44	XX
6UUCKB		0.2130	0.0037	0.70	0.2350	0.0099	1.85	OE
77U9EQ		0.2073	-0.0020	-0.39	0.2260	0.0009	0.17	OE
7YB3J6	X	0.2275	0.0181	3.48	0.2553	0.0302	5.63	OE
7ZK8XT		0.2133	0.0040	0.77	0.2281	0.0030	0.57	OE
8FAFT7		0.2083	-0.0010	-0.19	0.2253	0.0002	0.04	OE
8MQ62D		0.2114	0.0021	0.39	0.2271	0.0020	0.37	OE
8NM9GG		0.2051	-0.0042	-0.82	0.2201	-0.0050	-0.94	XX
94FNBL		0.2107	0.0013	0.25	0.2230	-0.0021	-0.39	OE
97HJ3N		0.2121	0.0028	0.53	0.2276	0.0025	0.47	OE
9D6AQ6		0.2113	0.0020	0.38	0.2257	0.0006	0.11	IC
9J6P37		0.2100	0.0007	0.13	0.2300	0.0049	0.92	OE
9U7RFA		0.2177	0.0083	1.60	0.2327	0.0076	1.41	OE
9X3ZKA		0.2080	-0.0013	-0.26	0.2253	0.0002	0.04	OE
ABR4JU		0.2037	-0.0057	-1.09	0.2197	-0.0054	-1.01	OE
AF3K26		0.2100	0.0007	0.13	0.2253	0.0002	0.04	OE
ANUM47		0.2047	-0.0047	-0.90	0.2217	-0.0034	-0.64	OE
AVZ7KK		0.1997	-0.0097	-1.86	0.2147	-0.0104	-1.95	OE
AXKNFK		0.2093	0.0000	0.00	0.2223	-0.0028	-0.52	OE
B3A8XK		0.2063	-0.0030	-0.58	0.2233	-0.0018	-0.33	IC
B7QVUK		0.2092	-0.0002	-0.03	0.2249	-0.0002	-0.03	OE
BB3Z4Y		0.2113	0.0020	0.38	0.2270	0.0019	0.36	OE
BE4FTF		0.2083	-0.0010	-0.19	0.2240	-0.0011	-0.20	IC
BXTU6J	X	0.0210	-0.1883	-36.19	0.0237	-0.2014	-37.59	IC
C2BDRY	*	0.2124	0.0031	0.59	0.2187	-0.0064	-1.19	XX
CBJ4CP		0.2157	0.0063	1.21	0.2290	0.0039	0.73	OE
CTMCPJ		0.2043	-0.0050	-0.96	0.2230	-0.0021	-0.39	ED
DD48L9		0.1997	-0.0097	-1.86	0.2143	-0.0108	-2.01	XX
DERQGE		0.2047	-0.0047	-0.90	0.2210	-0.0041	-0.76	IC

		Sample L53			Sample L54			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
DNHCNX	*	0.2044	-0.0050	-0.96	0.2305	0.0054	1.01	XX
DPBTN8		0.2097	0.0004	0.07	0.2253	0.0002	0.03	OE
DQ8H6N		0.2160	0.0067	1.28	0.2287	0.0036	0.67	OE
DURWZJ		0.2080	-0.0013	-0.26	0.2240	-0.0011	-0.20	OE
EMKAEE		0.2037	-0.0057	-1.09	0.2250	-0.0001	-0.02	GD
ERWWW6		0.2176	0.0082	1.58	0.2346	0.0095	1.77	OE
F3BMA7		0.2090	-0.0004	-0.07	0.2268	0.0017	0.31	OE
F7HPMQ		0.2157	0.0063	1.21	0.2297	0.0046	0.85	AE
F83F7G		0.2080	-0.0013	-0.26	0.2230	-0.0021	-0.39	OE
FHLV9J		0.2070	-0.0023	-0.45	0.2213	-0.0038	-0.70	XX
FLPM3H		0.2120	0.0027	0.51	0.2270	0.0019	0.36	OE
FUF98U		0.2138	0.0045	0.86	0.2296	0.0045	0.84	OE
FVDTC9		0.2163	0.0070	1.34	0.2340	0.0089	1.66	OE
FX43C2		0.2117	0.0023	0.45	0.2280	0.0029	0.54	OE
FXL2ND	X	0.2131	0.0037	0.72	0.2373	0.0122	2.28	IC
GCGP9C		0.2057	-0.0037	-0.71	0.2223	-0.0028	-0.52	OE
GCHG6Y		0.2047	-0.0047	-0.90	0.2207	-0.0044	-0.83	GD
GEHW8V	X	0.2287	0.0193	3.71	0.2370	0.0119	2.22	OE
GFGN8H		0.2083	-0.0010	-0.19	0.2236	-0.0015	-0.28	OE
GKL4LX		0.2053	-0.0040	-0.77	0.2203	-0.0048	-0.89	OE
GN7C3K		0.2118	0.0025	0.47	0.2262	0.0011	0.21	OE
GRBXWC		0.2067	-0.0026	-0.51	0.2248	-0.0003	-0.05	OE
GT7WDC		0.2033	-0.0060	-1.15	0.2200	-0.0051	-0.95	OE
GVE4RC		0.2083	-0.0010	-0.20	0.2263	0.0012	0.23	OE
GWQ9C2		0.2110	0.0017	0.32	0.2217	-0.0034	-0.64	OE
H2VRLE		0.2107	0.0013	0.25	0.2257	0.0006	0.11	OE
HYPF2X		0.2169	0.0076	1.46	0.2301	0.0050	0.93	OE
J68JCW		0.2090	-0.0003	-0.07	0.2237	-0.0014	-0.27	OE
JDZAR8		0.2090	-0.0003	-0.07	0.2240	-0.0011	-0.20	OE
JHBTQ7		0.2123	0.0030	0.57	0.2259	0.0008	0.15	GD
JNZ9GY		0.2080	-0.0013	-0.26	0.2260	0.0009	0.17	IC
JUVQ9W		0.2050	-0.0043	-0.83	0.2227	-0.0024	-0.45	OE
JVHBKN		0.2090	-0.0003	-0.07	0.2223	-0.0028	-0.52	DR
JXTDZZ		0.2052	-0.0042	-0.80	0.2197	-0.0054	-1.02	OE
JY4UQT		0.2120	0.0027	0.52	0.2270	0.0019	0.35	OE
K734WB		0.2073	-0.0020	-0.39	0.2283	0.0032	0.60	XX
KE88UT		0.2050	-0.0043	-0.83	0.2174	-0.0077	-1.43	XX
KG2CFN		0.2193	0.0100	1.92	0.2377	0.0126	2.35	OE
KTUBDC		0.2147	0.0053	1.02	0.2333	0.0082	1.54	WD
KWBGMZ	X	0.1790	-0.0303	-5.83	0.1933	-0.0318	-5.93	OE
L238T3		0.2080	-0.0013	-0.26	0.2245	-0.0006	-0.12	OE
L6HXWC		0.2203	0.0110	2.11	0.2393	0.0142	2.66	OE
LQ2YYX	X	0.2363	0.0270	5.18	0.2458	0.0207	3.86	OE
LT78VV		0.2064	-0.0030	-0.57	0.2235	-0.0016	-0.30	OE
LU7FD9		0.2063	-0.0030	-0.58	0.2213	-0.0038	-0.70	OE
LXYNF3		0.2080	-0.0013	-0.26	0.2230	-0.0021	-0.39	OE
LZ8ZX4		0.2093	0.0000	0.00	0.2261	0.0010	0.19	OE

		Sample L53			Sample L54			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
MENHU9		0.1967	-0.0127	-2.44	0.2163	-0.0088	-1.64	IC
MGF3NP		0.2143	0.0050	0.96	0.2320	0.0069	1.29	DR
MT7C7X		0.2126	0.0033	0.63	0.2260	0.0009	0.17	AE
N7AKJY	*	0.2203	0.0110	2.11	0.2403	0.0152	2.85	OE
N8HW22		0.2070	-0.0023	-0.45	0.2263	0.0012	0.23	XX
NA48WU		0.2223	0.0130	2.50	0.2387	0.0136	2.53	OE
ND7N33		0.2020	-0.0073	-1.41	0.2190	-0.0061	-1.14	IC
NFD7TU		0.2030	-0.0063	-1.22	0.2210	-0.0041	-0.76	OE
NFDB3W		0.2108	0.0014	0.27	0.2232	-0.0019	-0.35	OE
NH4WZJ		0.2149	0.0056	1.07	0.2302	0.0051	0.95	OE
NQCGWZ		0.2094	0.0001	0.02	0.2218	-0.0033	-0.62	OE
NTFXT6		0.2090	-0.0003	-0.07	0.2260	0.0009	0.17	XX
P972A9		0.2167	0.0073	1.41	0.2300	0.0049	0.92	OE
PWVT6V	X	0.2300	0.0207	3.97	0.2433	0.0182	3.41	GD
PWW6WN		0.2137	0.0044	0.84	0.2292	0.0041	0.77	AE
Q3U7JV		0.2138	0.0044	0.85	0.2302	0.0051	0.96	OE
Q8QV3N		0.2206	0.0113	2.16	0.2392	0.0141	2.63	OE
QDWW8X		0.2047	-0.0047	-0.90	0.2233	-0.0018	-0.33	IC
QLWWTC		0.2053	-0.0040	-0.77	0.2273	0.0022	0.42	OE
QN283U		0.2067	-0.0027	-0.51	0.2217	-0.0034	-0.64	XX
QTA9YR		0.1968	-0.0125	-2.41	0.2116	-0.0135	-2.52	OE
R4RPDA		0.2037	-0.0057	-1.09	0.2153	-0.0098	-1.82	OE
R7FLUX		0.2087	-0.0006	-0.12	0.2242	-0.0009	-0.17	OE
R7JLZH		0.1970	-0.0123	-2.37	0.2103	-0.0148	-2.76	OE
R8Q4YE		0.2082	-0.0011	-0.22	0.2233	-0.0018	-0.34	OE
R9KR74		0.2147	0.0053	1.02	0.2283	0.0032	0.60	OE
RP7G9W		0.2167	0.0073	1.41	0.2300	0.0049	0.92	OE
RTUNYK		0.2087	-0.0007	-0.13	0.2263	0.0012	0.23	XX
RU2L4V		0.2123	0.0030	0.57	0.2280	0.0029	0.54	OE
TK9CW4		0.2043	-0.0050	-0.96	0.2210	-0.0041	-0.76	OE
TYDC7V		0.2039	-0.0054	-1.04	0.2224	-0.0027	-0.51	IC
UBH6XX		0.2116	0.0023	0.43	0.2295	0.0044	0.82	IC
UC9VRL		0.2082	-0.0011	-0.22	0.2181	-0.0070	-1.31	OE
UTKNQF		0.2050	-0.0043	-0.83	0.2193	-0.0058	-1.08	OE
VDF3JX		0.2179	0.0086	1.65	0.2314	0.0063	1.18	OE
VDK6FH		0.2050	-0.0043	-0.83	0.2220	-0.0031	-0.58	OE
VLEEXT		0.2043	-0.0050	-0.97	0.2197	-0.0054	-1.00	OE
VQPGVG		0.2098	0.0005	0.09	0.2277	0.0026	0.49	OE
VWFDMM		0.2017	-0.0077	-1.48	0.2170	-0.0081	-1.51	OE
WQREUJ	*	0.2103	0.0010	0.19	0.2140	-0.0111	-2.07	OE
WXMW6W		0.2136	0.0042	0.81	0.2228	-0.0023	-0.43	OE
WYXDDT	X	0.1740	-0.0353	-6.79	0.1870	-0.0381	-7.11	XX
X6GNLN		0.2092	-0.0001	-0.02	0.2252	0.0001	0.03	OE
X7D3B3		0.2000	-0.0093	-1.80	0.2220	-0.0031	-0.58	GD
XDDCNM		0.2069	-0.0024	-0.47	0.2235	-0.0016	-0.30	DR
XJ2LXB		0.2113	0.0020	0.38	0.2280	0.0029	0.54	OE
XL4EYV		0.2058	-0.0035	-0.67	0.2219	-0.0032	-0.59	WD

Fasteners and Metals Interlaboratory Testing Program

Analysis 175

Carbon & Low Alloy Steel, Element #6
MOLYBDENUM (Mo)

WebCode	Data Flag	Sample L53 Lab Mean	Sample L53 Diff. from Grand Mean	Sample L53 CPV	Sample L54 Lab Mean	Sample L54 Diff. from Grand Mean	Sample L54 CPV	Method
XXGUP2		0.2033	-0.0060	-1.15	0.2193	-0.0058	-1.08	OE
XXHGBL		0.2067	-0.0027	-0.51	0.2233	-0.0018	-0.33	IC
Y2DMEP		0.2080	-0.0013	-0.26	0.2233	-0.0018	-0.33	OE
YGQ4CK		0.2087	-0.0007	-0.13	0.2250	-0.0001	-0.02	OE
YNQ78E		0.2130	0.0037	0.70	0.2273	0.0022	0.42	OE
YPLHDE		0.2137	0.0043	0.83	0.2250	-0.0001	-0.02	XX
YTJC8F		0.2067	-0.0027	-0.51	0.2187	-0.0064	-1.20	OE
YUH43W		0.2072	-0.0022	-0.42	0.2243	-0.0008	-0.14	OE
YUHKBT		0.2110	0.0017	0.32	0.2287	0.0036	0.67	OE
Z69U7T		0.2107	0.0013	0.25	0.2260	0.0009	0.17	OE
Z7746P		0.2027	-0.0067	-1.28	0.2183	-0.0068	-1.27	OE
ZD4CPP		0.2097	0.0004	0.07	0.2235	-0.0016	-0.30	XX

Summary Statistics

	Sample L53		Sample L54	
Grand Means	0.2093	Percent	0.2251	Percent
Stnd Dev Btwn Labs	0.0052	Percent	0.0054	Percent

Samples L53, L54 : AISI 8740 - UNS G87400, AISI 8740 - UNS G87400

Statistics based on 140 of 153 reporting participants

Key to Method Codes Reported by Participants

AE	Spectrometry - Atomic Emission (AES)	DR	Spectrometry - Direct Reading OE (DROES)
ED	X-Ray Fluorescence - Energy Dispersive (EDX)	GD	Spectrometry - Glow Discharge (GDS)
IC	Spectrometry - Inductively Coupled Plasma (ICP)	OE	Spectrometry - Optical Emission (OES)
WD	X-Ray Fluorescence - Wavelength Dispersive (WDX)	XX	Please Indicate Method Used for Current Element

Comments on Assigned Data Flags for Test #175

69WXVD (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample L54.

6NWLC8 (X) - Data for both samples are low. Possible Systematic Error.

7YB3J6 (X) - Data for both samples are high. Possible Systematic Error.

BXTU6J (X) - Extreme data.

FXL2ND (X) - Inconsistent in testing between samples. Inconsistent within the determinations of both samples.

GEHW8V (X) - Data for sample L53 are high. Inconsistent within the determinations of sample L54.

KWBGMZ (X) - Data for both samples are low. Possible Systematic Error.

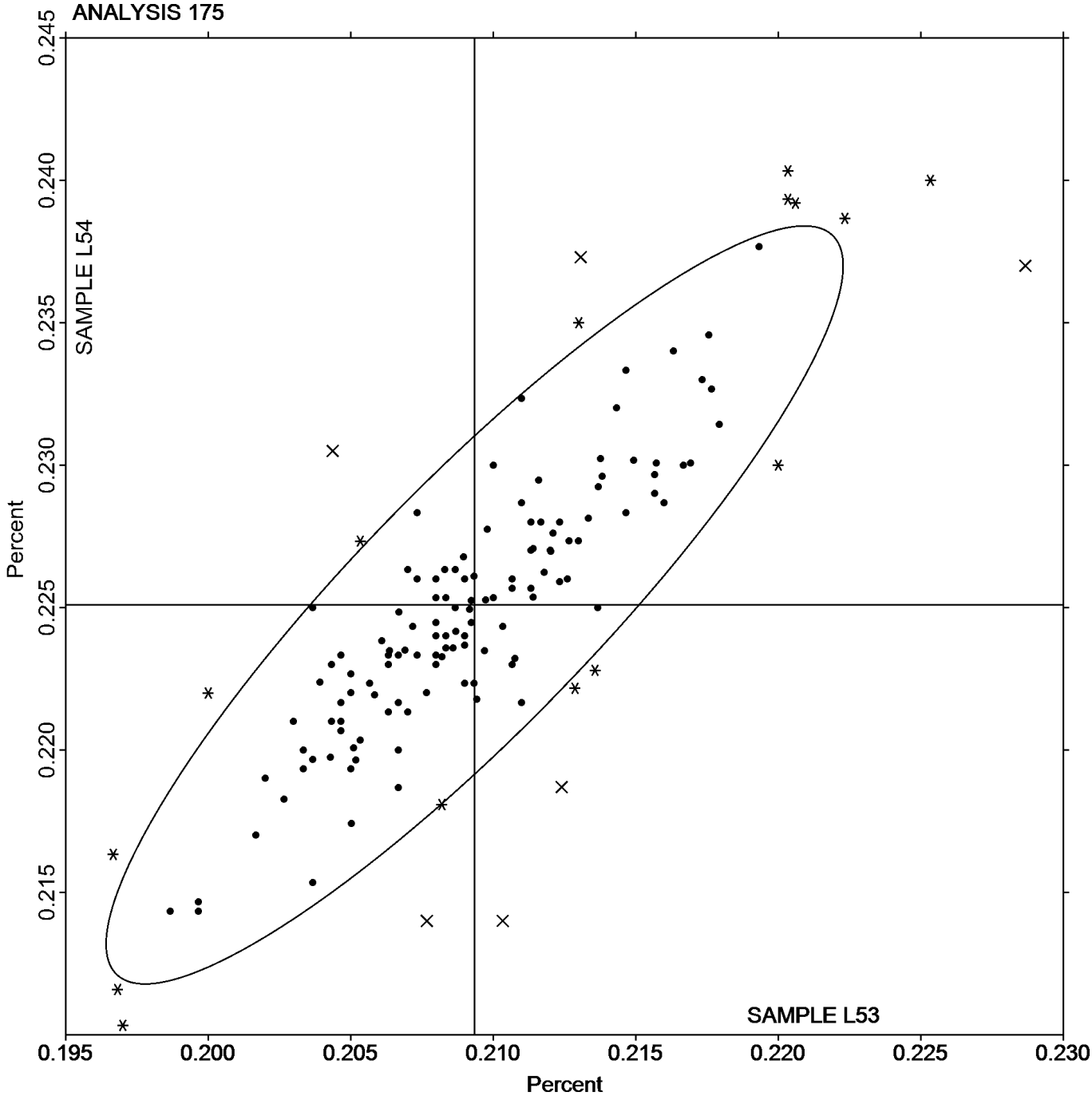
LQ2YYX (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of both samples.

PWVT6V (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of sample L54.

WYXDDT (X) - Data for both samples are low. Possible Systematic Error.

SAMPLE L53
0.2093 Percent

SAMPLE L54
0.2251 Percent



		Sample L53			Sample L54			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
2BBT64		0.4100	-0.0012	-0.14	0.4467	-0.0039	-0.40	OE
2CWLBD		0.4130	0.0018	0.20	0.4517	0.0011	0.12	OE
2G2PUK		0.3997	-0.0115	-1.30	0.4347	-0.0159	-1.65	OE
2GL88T		0.3967	-0.0145	-1.63	0.4380	-0.0125	-1.30	OE
2NZULB		0.4102	-0.0010	-0.12	0.4461	-0.0044	-0.46	WD
2TCA8L		0.4313	0.0201	2.26	0.4731	0.0225	2.34	OE
2YKK9T		0.4207	0.0095	1.07	0.4588	0.0082	0.86	OE
3489FD		0.4130	0.0018	0.20	0.4513	0.0008	0.08	OE
3Q6743		0.4202	0.0090	1.01	0.4564	0.0058	0.61	OE
47FH9B		0.4153	0.0041	0.46	0.4570	0.0065	0.67	GD
49XXFG		0.4070	-0.0042	-0.47	0.4450	-0.0055	-0.58	OE
4DFHR3		0.4033	-0.0079	-0.89	0.4469	-0.0036	-0.38	IC
4FFBEF		0.4167	0.0055	0.61	0.4540	0.0035	0.36	OE
4KG89G		0.4073	-0.0039	-0.43	0.4480	-0.0025	-0.26	OE
4T3WUA		0.4200	0.0088	0.99	0.4633	0.0128	1.33	IC
4UG2ZK		0.4060	-0.0052	-0.58	0.4452	-0.0053	-0.55	OE
66GWUA		0.4073	-0.0039	-0.43	0.4483	-0.0022	-0.23	OE
69WXVD		0.4130	0.0018	0.20	0.4470	-0.0035	-0.37	AE
6UUCKB		0.4080	-0.0032	-0.36	0.4480	-0.0025	-0.26	OE
77U9EQ		0.4107	-0.0005	-0.06	0.4603	0.0098	1.02	OE
7YB3J6	*	0.3856	-0.0256	-2.87	0.4273	-0.0233	-2.42	OE
7ZK8XT		0.4084	-0.0028	-0.32	0.4505	0.0000	0.00	OE
8FAFT7		0.4047	-0.0065	-0.73	0.4517	0.0011	0.12	OE
8MQ62D		0.4123	0.0011	0.13	0.4500	-0.0006	-0.06	OE
8NM9GG		0.4131	0.0019	0.21	0.4510	0.0005	0.05	XX
94FNBL		0.4127	0.0015	0.16	0.4497	-0.0009	-0.09	OE
97HJ3N		0.3900	-0.0212	-2.38	0.4282	-0.0223	-2.32	OE
9D6AQ6		0.4183	0.0071	0.80	0.4557	0.0051	0.53	IC
9J6P37		0.4100	-0.0012	-0.14	0.4500	-0.0005	-0.06	OE
9U7RFA		0.4113	0.0001	0.01	0.4530	0.0025	0.26	OE
9X3ZKA		0.4197	0.0085	0.95	0.4653	0.0148	1.54	OE
ABR4JU		0.4133	0.0021	0.24	0.4507	0.0001	0.01	OE
AF3K26		0.4120	0.0008	0.09	0.4480	-0.0025	-0.26	OE
ANUM47		0.4057	-0.0055	-0.62	0.4433	-0.0072	-0.75	OE
AVZ7KK	*	0.4245	0.0133	1.49	0.4721	0.0216	2.24	OE
AXKNFK		0.4170	0.0058	0.65	0.4563	0.0058	0.60	OE
B3A8XK		0.4083	-0.0029	-0.32	0.4503	-0.0002	-0.02	IC
B7QVUK		0.4072	-0.0040	-0.45	0.4512	0.0007	0.07	OE
BB3Z4Y		0.4123	0.0011	0.13	0.4513	0.0008	0.08	OE
BE4FTF		0.3970	-0.0142	-1.59	0.4337	-0.0169	-1.76	IC
BXTU6J	X	0.0418	-0.3694	-41.46	0.0483	-0.4022	-41.86	XX
C2BDRY	X	0.4670	0.0558	6.26	0.5067	0.0561	5.84	XX
CBJ4CP		0.4050	-0.0062	-0.70	0.4433	-0.0072	-0.75	OE
CTMCPJ		0.4163	0.0051	0.58	0.4647	0.0141	1.47	ED
DERQGE		0.4033	-0.0079	-0.88	0.4403	-0.0102	-1.06	IC
DNHCNX	*	0.4086	-0.0026	-0.30	0.4611	0.0105	1.10	XX
DPBTN8		0.4121	0.0009	0.10	0.4540	0.0034	0.36	OE

		Sample L53			Sample L54			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
DPWMUH		0.4233	0.0121	1.36	0.4727	0.0221	2.30	OE
DQ8H6N		0.4130	0.0018	0.20	0.4503	-0.0002	-0.02	OE
DURWZJ	*	0.4090	-0.0022	-0.25	0.4617	0.0111	1.16	OE
EMKAEE		0.4083	-0.0029	-0.32	0.4500	-0.0005	-0.06	GD
ERWWW6		0.4165	0.0053	0.59	0.4450	-0.0056	-0.58	OE
F3BMA7		0.4003	-0.0109	-1.22	0.4397	-0.0108	-1.12	OE
F7HPMQ		0.4293	0.0181	2.03	0.4673	0.0168	1.75	AE
F83F7G		0.4110	-0.0002	-0.02	0.4507	0.0001	0.01	OE
FHLV9J		0.3970	-0.0142	-1.59	0.4347	-0.0159	-1.65	XX
FLPM3H		0.4160	0.0048	0.54	0.4517	0.0011	0.12	OE
FUF98U	X	0.4246	0.0134	1.50	0.4457	-0.0049	-0.51	OE
FVDTC9		0.4160	0.0048	0.54	0.4583	0.0078	0.81	OE
FX43C2		0.4010	-0.0102	-1.15	0.4393	-0.0112	-1.17	OE
FXL2ND		0.4108	-0.0004	-0.05	0.4536	0.0031	0.32	IC
GCGP9C		0.4137	0.0025	0.28	0.4577	0.0071	0.74	OE
GCHG6Y		0.4100	-0.0012	-0.14	0.4477	-0.0029	-0.30	GD
GEHW8V	X	0.4320	0.0208	2.33	0.4810	0.0305	3.17	OE
GFGN8H		0.4056	-0.0056	-0.63	0.4435	-0.0070	-0.73	OE
GKL4LX		0.4157	0.0045	0.50	0.4553	0.0048	0.50	OE
GN7C3K		0.4139	0.0027	0.30	0.4506	0.0001	0.01	OE
GRBXWC		0.4147	0.0035	0.39	0.4560	0.0055	0.57	OE
GT7WDC		0.4133	0.0021	0.24	0.4500	-0.0005	-0.06	OE
GVE4RC		0.4194	0.0082	0.92	0.4589	0.0084	0.87	OE
GWQ9C2		0.4197	0.0085	0.95	0.4540	0.0035	0.36	OE
H2VRLE		0.4280	0.0168	1.88	0.4663	0.0158	1.64	OE
HYPF2X		0.4220	0.0108	1.22	0.4585	0.0079	0.83	OE
J68JCW		0.4040	-0.0072	-0.81	0.4420	-0.0085	-0.89	OE
JDZAR8		0.4060	-0.0052	-0.58	0.4493	-0.0012	-0.13	OE
JHBTQ7		0.4105	-0.0007	-0.08	0.4470	-0.0036	-0.37	GD
JNZ9GY	*	0.4325	0.0213	2.39	0.4745	0.0240	2.49	IC
JUVQ9W		0.3877	-0.0235	-2.64	0.4327	-0.0179	-1.86	OE
JVHBKN		0.4110	-0.0002	-0.02	0.4493	-0.0012	-0.13	DR
JXTDZZ		0.4028	-0.0084	-0.94	0.4415	-0.0090	-0.94	OE
JY4UQT		0.4097	-0.0015	-0.17	0.4508	0.0003	0.03	OE
K734WB	*	0.3870	-0.0242	-2.72	0.4383	-0.0122	-1.27	GD
KE88UT	X	0.3771	-0.0341	-3.83	0.4115	-0.0390	-4.06	OE
KG2CFN		0.3940	-0.0172	-1.93	0.4287	-0.0219	-2.28	OE
KTUBDC		0.4130	0.0018	0.20	0.4550	0.0045	0.46	WD
KWBGMZ	X	0.4527	0.0415	4.65	0.5037	0.0531	5.53	OE
L238T3		0.4130	0.0018	0.20	0.4499	-0.0006	-0.07	OE
L6HXWC		0.3957	-0.0155	-1.74	0.4253	-0.0252	-2.62	OE
LQ2YYX	X	0.3752	-0.0360	-4.04	0.4086	-0.0420	-4.37	OE
LT78VV		0.4067	-0.0045	-0.50	0.4558	0.0053	0.55	OE
LU7FD9		0.4227	0.0115	1.29	0.4550	0.0045	0.46	OE
LXYNF3		0.4307	0.0195	2.18	0.4703	0.0198	2.06	XX
LZ8ZX4		0.4125	0.0013	0.15	0.4539	0.0034	0.35	OE
MENHU9		0.4220	0.0108	1.21	0.4597	0.0091	0.95	IC

		Sample L53			Sample L54			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
MGF3NP		0.4107	-0.0005	-0.06	0.4537	0.0031	0.33	DR
MT7C7X		0.4241	0.0129	1.44	0.4633	0.0128	1.33	AE
N7AKJY		0.3990	-0.0122	-1.37	0.4403	-0.0102	-1.06	XX
N8HW22		0.4043	-0.0069	-0.77	0.4447	-0.0059	-0.61	XX
NA48WU	*	0.4140	0.0028	0.31	0.4730	0.0225	2.34	OE
ND7N33		0.3960	-0.0152	-1.71	0.4350	-0.0155	-1.62	IC
NFD7TU		0.4067	-0.0045	-0.51	0.4400	-0.0105	-1.10	OE
NFDB3W		0.4045	-0.0067	-0.75	0.4414	-0.0091	-0.95	OE
NH4WZJ		0.4120	0.0008	0.09	0.4512	0.0007	0.07	OE
NQCGWZ		0.4292	0.0180	2.02	0.4677	0.0171	1.78	OE
P972A9		0.4060	-0.0052	-0.58	0.4437	-0.0069	-0.72	OE
PWVT6V	X	0.5433	0.1321	14.83	0.5800	0.1295	13.47	GD
PWW6WN		0.4163	0.0051	0.58	0.4557	0.0051	0.53	AE
Q3U7JV		0.4006	-0.0106	-1.19	0.4389	-0.0117	-1.21	OE
Q8QV3N		0.4110	-0.0002	-0.02	0.4510	0.0004	0.04	OE
QDWW8X		0.4140	0.0028	0.31	0.4577	0.0071	0.74	IC
QLWWTC	X	0.3803	-0.0309	-3.46	0.4463	-0.0042	-0.44	OE
QN283U		0.4110	-0.0002	-0.02	0.4557	0.0051	0.53	GD
QTA9YR		0.4165	0.0053	0.60	0.4520	0.0015	0.15	OE
R4RPDA		0.4020	-0.0092	-1.03	0.4487	-0.0019	-0.19	OE
R7FLUX		0.4187	0.0075	0.84	0.4596	0.0091	0.95	OE
R7JLZH		0.4037	-0.0075	-0.85	0.4407	-0.0099	-1.03	OE
R8Q4YE		0.4114	0.0002	0.03	0.4501	-0.0005	-0.05	OE
R9KR74		0.4177	0.0065	0.73	0.4550	0.0045	0.46	OE
RP7G9W		0.4000	-0.0112	-1.26	0.4333	-0.0172	-1.79	OE
RU2L4V		0.4140	0.0028	0.31	0.4513	0.0008	0.08	OE
TK9CW4		0.4017	-0.0095	-1.07	0.4397	-0.0109	-1.13	OE
TYDC7V		0.4176	0.0064	0.72	0.4489	-0.0017	-0.17	IC
UBH6XX		0.4110	-0.0002	-0.02	0.4556	0.0051	0.53	IC
UC9VRL		0.3989	-0.0123	-1.38	0.4414	-0.0091	-0.95	OE
UTKNQF		0.4160	0.0048	0.54	0.4587	0.0081	0.85	OE
VDF3JX		0.4118	0.0006	0.07	0.4492	-0.0014	-0.14	OE
VDK6FH		0.4057	-0.0055	-0.62	0.4533	0.0028	0.29	OE
VLEEXT		0.4077	-0.0035	-0.39	0.4481	-0.0025	-0.26	OE
VQPGVG		0.4062	-0.0050	-0.56	0.4473	-0.0032	-0.34	OE
VWFDMM		0.4017	-0.0095	-1.07	0.4400	-0.0105	-1.10	OE
WQREUJ	X	0.4067	-0.0045	-0.51	0.4047	-0.0459	-4.77	OE
WXMW6W		0.4306	0.0194	2.18	0.4616	0.0111	1.15	OE
X6GNLN		0.4065	-0.0047	-0.52	0.4482	-0.0024	-0.25	OE
X7D3B3		0.4160	0.0048	0.54	0.4447	-0.0059	-0.61	GD
XDDCNM		0.4066	-0.0046	-0.52	0.4409	-0.0096	-1.00	DR
XJ2LXB		0.4187	0.0075	0.84	0.4577	0.0071	0.74	OE
XL4EYV		0.4097	-0.0015	-0.17	0.4480	-0.0025	-0.26	WD
XXGUP2		0.4120	0.0008	0.09	0.4503	-0.0002	-0.02	OE
XXHGBL		0.4103	-0.0009	-0.10	0.4540	0.0035	0.36	IC
Y2DMEP		0.4287	0.0175	1.96	0.4693	0.0188	1.96	OE
YGQ4CK	X	0.4340	0.0228	2.56	0.4837	0.0331	3.45	OE

Fasteners and Metals Interlaboratory Testing Program

Analysis 176

Carbon & Low Alloy Steel, Element #7

NICKEL (Ni)

WebCode	Data Flag	Sample L53 Lab Mean	Sample L53 Diff. from Grand Mean	Sample L53 CPV	Sample L54 Lab Mean	Sample L54 Diff. from Grand Mean	Sample L54 CPV	Method
YNQ78E		0.4117	0.0005	0.05	0.4543	0.0038	0.39	OE
YPLHDE		0.4183	0.0071	0.80	0.4540	0.0035	0.36	XX
YTJC8F		0.4200	0.0088	0.99	0.4587	0.0081	0.85	OE
YUH43W		0.4242	0.0130	1.46	0.4660	0.0155	1.61	OE
YUHKBT		0.4057	-0.0055	-0.62	0.4467	-0.0039	-0.40	OE
Z69U7T		0.4180	0.0068	0.76	0.4540	0.0035	0.36	OE
Z7746P		0.3955	-0.0157	-1.77	0.4324	-0.0181	-1.89	OE
ZD4CPP		0.4191	0.0079	0.88	0.4548	0.0043	0.45	XX

Summary Statistics

	Sample L53		Sample L54	
Grand Means	0.4112	Percent	0.4505	Percent
Stnd Dev Btwn Labs	0.0089	Percent	0.0096	Percent

Samples L53, L54 : AISI 8740 - UNS G87400, AISI 8740 - UNS G87400

Statistics based on 134 of 149 reporting participants

Key to Method Codes Reported by Participants

AE	Spectrometry - Atomic Emission (AES)	DR	Spectrometry - Direct Reading OE (DROES)
ED	X-Ray Fluorescence - Energy Dispersive (EDX)	GD	Spectrometry - Glow Discharge (GDS)
IC	Spectrometry - Inductively Coupled Plasma (ICP)	OE	Spectrometry - Optical Emission (OES)
WD	X-Ray Fluorescence - Wavelength Dispersive (WDX)	XX	Please Indicate Method Used for Current Element

Comments on Assigned Data Flags for Test #176

BXTU6J (X) - Extreme data.

C2BDRY (X) - Data for both samples are high. Possible Systematic Error.

FUF98U (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample L54.

GEHW8V (X) - Data for sample L54 are high.

KE88UT (X) - Data for both samples are low. Possible Systematic Error.

KWBGMZ (X) - Data for both samples are high. Possible Systematic Error.

LQ2YYX (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of sample L53.

PWVT6V (X) - Extreme data.

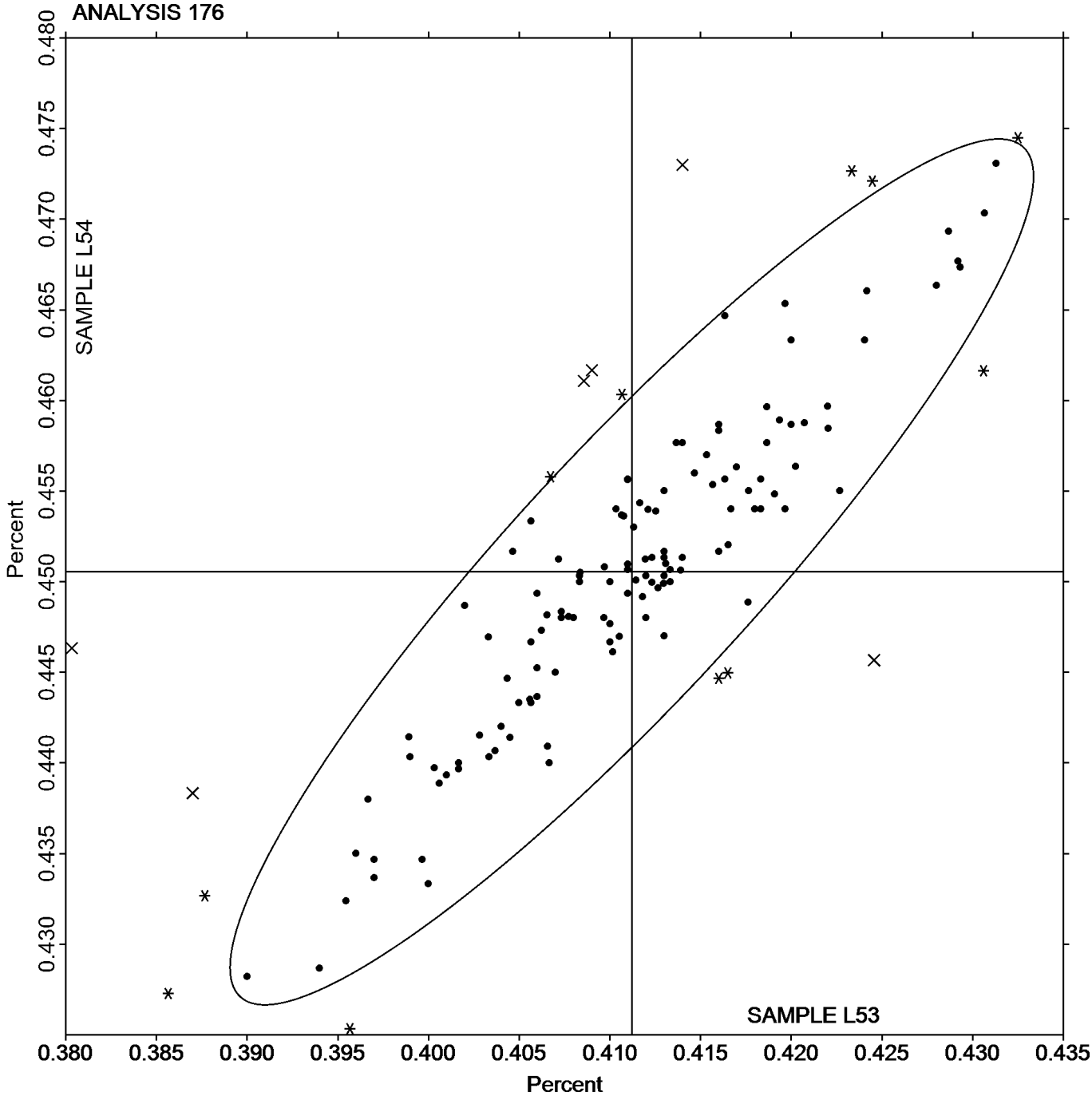
QLWWTC (X) - Data for sample L53 are low.

WQREUJ (X) - Data for sample L54 are low.

YGQ4CK (X) - Data for sample L54 are high.

SAMPLE L53
0.4112 Percent

SAMPLE L54
0.4505 Percent



		Sample L53			Sample L54			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
2BBT64		0.4900	0.0031	0.41	0.5167	0.0065	0.80	OE
2CWLBD		0.4877	0.0008	0.11	0.5083	-0.0018	-0.22	OE
2G2PUK		0.4927	0.0058	0.76	0.5090	-0.0011	-0.14	OE
2GL88T		0.4753	-0.0115	-1.51	0.5003	-0.0098	-1.19	OE
2NZULB	*	0.4900	0.0032	0.42	0.5010	-0.0091	-1.11	WD
2TCA8L		0.4873	0.0005	0.06	0.5095	-0.0006	-0.07	OE
2YKK9T		0.4901	0.0033	0.43	0.5152	0.0051	0.62	OE
3489FD		0.4833	-0.0035	-0.46	0.5027	-0.0075	-0.91	OE
3Q6743		0.4918	0.0049	0.65	0.5153	0.0052	0.63	OE
47FH9B	X	0.4563	-0.0305	-4.00	0.4750	-0.0351	-4.28	GD
49XXFG		0.4747	-0.0122	-1.60	0.4973	-0.0128	-1.56	OE
4DFHR3		0.4865	-0.0004	-0.05	0.5133	0.0032	0.39	IC
4FFBEF		0.4847	-0.0022	-0.29	0.5083	-0.0018	-0.22	OE
4KG89G		0.4857	-0.0012	-0.16	0.5100	-0.0001	-0.01	OE
4T3WUA		0.4967	0.0098	1.29	0.5267	0.0165	2.02	IC
4UG2ZK		0.4856	-0.0013	-0.17	0.5102	0.0001	0.01	OE
66GWUA		0.4960	0.0091	1.20	0.5207	0.0105	1.29	OE
69WXVD		0.4827	-0.0042	-0.55	0.5013	-0.0088	-1.07	AE
6UUCKB		0.4890	0.0021	0.28	0.5150	0.0049	0.59	OE
77U9EQ		0.4853	-0.0015	-0.20	0.5123	0.0022	0.27	OE
7YB3J6	X	0.4085	-0.0784	-10.27	0.4384	-0.0717	-8.75	OE
7ZK8XT	*	0.4829	-0.0040	-0.52	0.5187	0.0086	1.05	OE
8FAFT7		0.4897	0.0028	0.37	0.5090	-0.0011	-0.14	OE
8MQ62D		0.4991	0.0122	1.60	0.5247	0.0145	1.77	OE
8NM9GG	X	0.5210	0.0342	4.48	0.5463	0.0362	4.42	XX
94FNBL		0.4870	0.0001	0.02	0.5083	-0.0018	-0.22	OE
97HJ3N		0.4769	-0.0100	-1.30	0.5004	-0.0097	-1.19	OE
9D6AQ6		0.4817	-0.0052	-0.68	0.4983	-0.0118	-1.44	IC
9J6P37		0.4800	-0.0069	-0.90	0.5100	-0.0001	-0.01	OE
9U7RFA		0.4910	0.0041	0.54	0.5117	0.0015	0.19	OE
9X3ZKA		0.4933	0.0065	0.85	0.5193	0.0092	1.12	OE
ABR4JU		0.4847	-0.0022	-0.29	0.5087	-0.0015	-0.18	OE
AF3K26		0.4883	0.0015	0.19	0.5097	-0.0005	-0.06	OE
ANUM47		0.4740	-0.0129	-1.68	0.4990	-0.0111	-1.36	OE
AVZ7KK		0.4800	-0.0068	-0.89	0.5031	-0.0070	-0.86	OE
AXKNFK		0.4880	0.0011	0.15	0.5087	-0.0015	-0.18	OE
B3A8XK		0.4900	0.0031	0.41	0.5127	0.0025	0.31	IC
B7QVUK		0.4863	-0.0006	-0.08	0.5099	-0.0003	-0.03	OE
BB3Z4Y		0.4870	0.0001	0.02	0.5113	0.0012	0.15	OE
BE4FTF		0.4830	-0.0039	-0.50	0.5077	-0.0025	-0.30	IC
BXTU6J	X	0.0491	-0.4378	-57.34	0.0539	-0.4562	-55.65	XX
C2BDRY		0.4940	0.0071	0.94	0.5170	0.0069	0.84	XX
CBJ4CP	*	0.5063	0.0195	2.55	0.5213	0.0112	1.37	OE
CTMCPJ		0.4773	-0.0095	-1.25	0.5010	-0.0091	-1.11	ED
DERQGE		0.5043	0.0175	2.29	0.5297	0.0195	2.38	IC
DNHCNX	X	0.4562	-0.0306	-4.01	0.4919	-0.0182	-2.22	XX
DPBTN8		0.4848	-0.0020	-0.26	0.5080	-0.0021	-0.25	OE

		Sample L53			Sample L54			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
DPWMUH		0.4970	0.0101	1.33	0.5173	0.0072	0.88	OE
DQ8H6N		0.4923	0.0055	0.72	0.5143	0.0042	0.51	OE
DURWZJ		0.4910	0.0041	0.54	0.5137	0.0035	0.43	OE
EMKAEE		0.4983	0.0115	1.50	0.5270	0.0169	2.06	GD
ERWWW6		0.4938	0.0070	0.91	0.5227	0.0126	1.54	OE
F3BMA7		0.4696	-0.0172	-2.26	0.4904	-0.0197	-2.41	OE
F7HPMQ		0.4913	0.0045	0.59	0.5107	0.0005	0.07	AE
F83F7G		0.4883	0.0015	0.19	0.5090	-0.0011	-0.14	OE
FHLV9J		0.4873	0.0005	0.06	0.5087	-0.0015	-0.18	XX
FLPM3H		0.4867	-0.0002	-0.02	0.5100	-0.0001	-0.01	OE
FUF98U		0.4694	-0.0175	-2.29	0.4886	-0.0216	-2.63	OE
FVDTC9		0.4940	0.0071	0.94	0.5220	0.0119	1.45	OE
FX43C2		0.4910	0.0041	0.54	0.5147	0.0045	0.55	OE
FXL2ND		0.5032	0.0163	2.14	0.5302	0.0201	2.45	IC
GCGP9C		0.4937	0.0068	0.89	0.5173	0.0072	0.88	OE
GCHG6Y		0.4753	-0.0115	-1.51	0.4987	-0.0115	-1.40	GD
GEHW8V	*	0.5053	0.0185	2.42	0.5337	0.0235	2.87	OE
GFGN8H		0.4865	-0.0003	-0.04	0.5076	-0.0025	-0.31	OE
GKL4LX		0.4717	-0.0152	-1.99	0.4937	-0.0165	-2.01	OE
GN7C3K		0.4834	-0.0035	-0.45	0.5057	-0.0044	-0.54	OE
GRBXWC		0.4820	-0.0049	-0.64	0.5057	-0.0045	-0.54	OE
GT7WDC		0.4833	-0.0035	-0.46	0.5100	-0.0001	-0.01	OE
GVE4RC		0.4894	0.0025	0.33	0.5096	-0.0005	-0.06	OE
GWQ9C2		0.4833	-0.0035	-0.46	0.5027	-0.0075	-0.91	OE
H2VRLE		0.4953	0.0085	1.11	0.5177	0.0075	0.92	OE
HYPF2X		0.5009	0.0140	1.84	0.5175	0.0073	0.90	OE
J68JCW		0.4797	-0.0072	-0.94	0.5033	-0.0068	-0.83	OE
JDZAR8		0.4877	0.0008	0.11	0.5073	-0.0028	-0.34	OE
JHBTQ7		0.4959	0.0090	1.18	0.5200	0.0098	1.20	GD
JNZ9GY	X	0.5175	0.0306	4.01	0.5435	0.0334	4.07	IC
JUVQ9W		0.4760	-0.0109	-1.42	0.5060	-0.0041	-0.50	OE
JVHBKN		0.4923	0.0055	0.72	0.5143	0.0042	0.51	DR
JXTDZZ		0.4833	-0.0035	-0.46	0.5086	-0.0015	-0.18	OE
JY4UQT		0.4863	-0.0006	-0.07	0.5085	-0.0016	-0.20	OE
K734WB		0.4800	-0.0069	-0.90	0.5077	-0.0025	-0.30	GD
KE88UT		0.4827	-0.0042	-0.54	0.5032	-0.0069	-0.85	OE
KG2CFN	*	0.5043	0.0175	2.29	0.5207	0.0105	1.29	OE
KTUBDC		0.4850	-0.0019	-0.24	0.5117	0.0015	0.19	WD
KWBGMZ		0.4853	-0.0015	-0.20	0.5077	-0.0025	-0.30	OE
L238T3		0.4815	-0.0053	-0.70	0.5070	-0.0031	-0.38	OE
L6HXWC	X	0.4653	-0.0215	-2.82	0.4953	-0.0148	-1.80	OE
LQ2YYX	X	0.4708	-0.0160	-2.10	0.4831	-0.0271	-3.30	OE
LT78VV	*	0.4683	-0.0186	-2.43	0.4999	-0.0102	-1.25	OE
LU7FD9		0.4730	-0.0139	-1.81	0.4957	-0.0145	-1.76	OE
LXYNF3		0.4860	-0.0009	-0.11	0.5087	-0.0015	-0.18	OE
LZ8ZX4		0.4877	0.0009	0.12	0.5138	0.0037	0.45	OE
MENHU9	*	0.4970	0.0101	1.33	0.5083	-0.0018	-0.22	IC

		Sample L53			Sample L54			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
MGF3NP		0.4847	-0.0022	-0.29	0.5113	0.0012	0.15	DR
MT7C7X		0.4863	-0.0005	-0.07	0.5089	-0.0012	-0.15	AE
N7AKJY		0.4990	0.0121	1.59	0.5253	0.0152	1.86	OE
N8HW22		0.4673	-0.0195	-2.56	0.4920	-0.0181	-2.21	XX
NA48WU		0.4760	-0.0109	-1.42	0.4993	-0.0108	-1.32	OE
ND7N33		0.4823	-0.0045	-0.59	0.5063	-0.0038	-0.46	IC
NFD7TU		0.4730	-0.0139	-1.81	0.4977	-0.0125	-1.52	OE
NFDB3W		0.4833	-0.0035	-0.46	0.5036	-0.0065	-0.79	OE
NH4WZJ		0.5022	0.0153	2.01	0.5256	0.0155	1.89	OE
NQCGWZ		0.4857	-0.0012	-0.16	0.5067	-0.0035	-0.42	OE
P972A9		0.4863	-0.0005	-0.07	0.5077	-0.0025	-0.30	OE
PWVT6V	X	0.5333	0.0465	6.09	0.5600	0.0499	6.08	GD
PWW6WN		0.4983	0.0115	1.50	0.5183	0.0082	1.00	AE
Q3U7JV		0.4826	-0.0042	-0.55	0.5068	-0.0034	-0.41	OE
Q8QV3N		0.4873	0.0005	0.06	0.5108	0.0007	0.09	OE
QDWW8X		0.4870	0.0001	0.02	0.5140	0.0039	0.47	IC
QLWWTC	X	0.4853	-0.0015	-0.20	0.4620	-0.0481	-5.87	OE
QN283U		0.4863	-0.0005	-0.07	0.5113	0.0012	0.15	GD
QTA9YR		0.4842	-0.0027	-0.35	0.5127	0.0025	0.31	OE
R4RPDA		0.4977	0.0108	1.42	0.5237	0.0135	1.65	OE
R7FLUX		0.4870	0.0001	0.02	0.5075	-0.0027	-0.32	OE
R7JLZH		0.4683	-0.0185	-2.43	0.4920	-0.0181	-2.21	OE
R8Q4YE		0.4949	0.0081	1.06	0.5159	0.0058	0.71	OE
R9KR74		0.4963	0.0095	1.24	0.5163	0.0062	0.76	OE
RP7G9W	X	0.4600	-0.0269	-3.52	0.4733	-0.0368	-4.49	OE
RU2L4V		0.4817	-0.0052	-0.68	0.5040	-0.0061	-0.75	OE
TK9CW4	X	0.4607	-0.0262	-3.43	0.4853	-0.0248	-3.02	OE
TW84N3		0.4990	0.0121	1.59	0.5210	0.0109	1.33	DR
TYDC7V		0.4889	0.0020	0.26	0.5039	-0.0063	-0.76	IC
UBH6XX		0.4856	-0.0012	-0.16	0.5054	-0.0047	-0.58	IC
UC9VRL		0.4878	0.0010	0.13	0.5077	-0.0024	-0.30	OE
UTKNQF		0.4863	-0.0005	-0.07	0.5107	0.0005	0.07	OE
VDF3JX		0.4891	0.0022	0.29	0.5095	-0.0006	-0.07	OE
VDK6FH		0.4837	-0.0032	-0.42	0.5127	0.0025	0.31	OE
VLEEXT		0.4882	0.0014	0.18	0.5114	0.0012	0.15	OE
VQPGVG		0.4820	-0.0049	-0.64	0.5079	-0.0022	-0.27	OE
VWFDMM		0.4890	0.0021	0.28	0.5113	0.0012	0.15	OE
WQREUJ		0.4820	-0.0049	-0.64	0.5083	-0.0018	-0.22	OE
WXMW6W		0.4816	-0.0052	-0.68	0.5018	-0.0083	-1.02	OE
X6GNLN		0.4858	-0.0011	-0.14	0.5063	-0.0038	-0.47	OE
X7D3B3	X	0.5197	0.0328	4.30	0.5280	0.0179	2.18	GD
XDDCNM		0.4877	0.0009	0.12	0.5066	-0.0035	-0.43	DR
XJ2LXB		0.4903	0.0035	0.46	0.5127	0.0025	0.31	OE
XL4EYV		0.4937	0.0068	0.89	0.5167	0.0065	0.80	WD
XXGUP2		0.4870	0.0001	0.02	0.5117	0.0015	0.19	OE
XXHGBL		0.4837	-0.0032	-0.42	0.5070	-0.0031	-0.38	IC
Y2DMEP		0.4853	-0.0015	-0.20	0.5093	-0.0008	-0.10	OE

WebCode	Data Flag	Sample L53 Lab Mean	Sample L53 Diff. from Grand Mean	Sample L53 CPV	Sample L54 Lab Mean	Sample L54 Diff. from Grand Mean	Sample L54 CPV	Method
YGQ4CK		0.4903	0.0035	0.46	0.5147	0.0045	0.55	OE
YNQ78E		0.4863	-0.0005	-0.07	0.5100	-0.0001	-0.01	OE
YPLHDE		0.4903	0.0035	0.46	0.5097	-0.0005	-0.06	XX
YTJC8F		0.4860	-0.0009	-0.11	0.5143	0.0042	0.51	OE
YUH43W		0.4808	-0.0061	-0.80	0.5079	-0.0022	-0.27	OE
YUHKBT		0.5013	0.0145	1.90	0.5243	0.0142	1.73	OE
Z69U7T		0.4787	-0.0082	-1.07	0.5000	-0.0101	-1.23	OE
Z7746P		0.4756	-0.0113	-1.47	0.4986	-0.0115	-1.40	OE
ZD4CPP		0.5023	0.0154	2.02	0.5241	0.0140	1.70	XX

Summary Statistics

	Sample L53		Sample L54	
Grand Means	0.4869	Percent	0.5101	Percent
Stnd Dev Btwn Labs	0.0076	Percent	0.0082	Percent

Samples L53, L54 : AISI 8740 - UNS G87400, AISI 8740 - UNS G87400

Statistics based on 131 of 150 reporting participants

Key to Method Codes Reported by Participants

AE	Spectrometry - Atomic Emission (AES)	DR	Spectrometry - Direct Reading OE (DROES)
ED	X-Ray Fluorescence - Energy Dispersive (EDX)	GD	Spectrometry - Glow Discharge (GDS)
IC	Spectrometry - Inductively Coupled Plasma (ICP)	OE	Spectrometry - Optical Emission (OES)
WD	X-Ray Fluorescence - Wavelength Dispersive (WDX)	XX	Please Indicate Method Used for Current Element

Comments on Assigned Data Flags for Test #177

47FH9B (X) - Data for both samples are low. Possible Systematic Error.

7YB3J6 (X) - Data for both samples are low. Possible Systematic Error.

8NM9GG (X) - Data for both samples are high. Possible Systematic Error.

BXTU6J (X) - Extreme data.

DNHCNX (X) - Data for sample L53 are low.

JNZ9GY (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of both samples.

L6HXWC (X) - Data for sample L53 are low.

LQ2YYX (X) - Data for sample L54 are low.

PWVT6V (X) - Data for both samples are high. Possible Systematic Error.

QLWWTC (X) - Data for sample L54 are low.

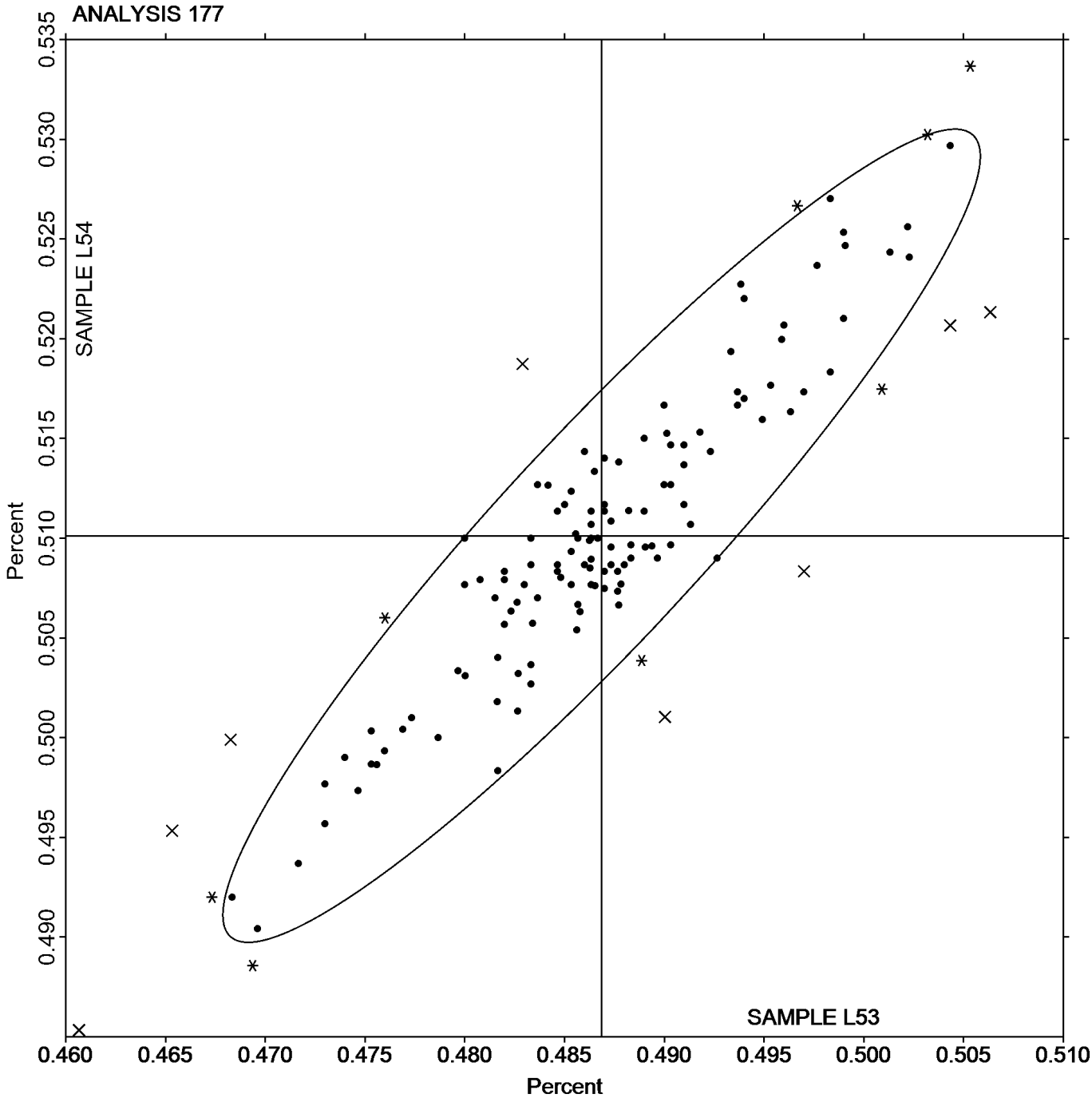
RP7G9W (X) - Data for both samples are low. Possible Systematic Error.

TK9CW4 (X) - Data for both samples are low. Possible Systematic Error.

X7D3B3 (X) - Data for sample L53 are high. Inconsistent within the determinations of sample L53.

SAMPLE L53
0.4869 Percent

SAMPLE L54
0.5101 Percent



		Sample L53			Sample L54			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
2BBT64		0.1900	0.0066	1.33	0.2400	0.0065	1.05	OE
2CWLBD		0.1840	0.0006	0.12	0.2366	0.0031	0.50	OE
2G2PUK		0.1747	-0.0088	-1.78	0.2213	-0.0122	-1.99	OE
2GL88T	*	0.1707	-0.0128	-2.59	0.2147	-0.0189	-3.07	OE
2TCA8L	X	0.1740	-0.0094	-1.90	0.2132	-0.0204	-3.31	OE
2YKK9T		0.1877	0.0042	0.86	0.2386	0.0051	0.83	OE
3489FD		0.1843	0.0009	0.18	0.2397	0.0061	1.00	OE
3Q6743		0.1876	0.0042	0.84	0.2369	0.0034	0.55	OE
47FH9B	X	0.1870	0.0036	0.72	0.2467	0.0131	2.13	GD
49XXFG		0.1867	0.0032	0.66	0.2383	0.0048	0.78	OE
4DFHR3		0.1959	0.0124	2.52	0.2449	0.0114	1.85	IC
4FFBEF		0.1857	0.0022	0.45	0.2357	0.0021	0.35	OE
4KG89G		0.1897	0.0062	1.26	0.2473	0.0138	2.24	OE
4T3WUA		0.1867	0.0032	0.66	0.2400	0.0065	1.05	IC
4UG2ZK		0.1852	0.0017	0.35	0.2368	0.0033	0.53	OE
66GWUA		0.1807	-0.0028	-0.56	0.2303	-0.0032	-0.52	OE
69WXVD		0.1853	0.0019	0.39	0.2330	-0.0005	-0.09	AE
6UUCKB		0.1820	-0.0014	-0.29	0.2330	-0.0005	-0.09	OE
77U9EQ		0.1783	-0.0051	-1.03	0.2340	0.0005	0.07	OE
7YB3J6	X	0.2325	0.0491	9.95	0.3740	0.1404	22.84	OE
7ZK8XT		0.1918	0.0084	1.70	0.2479	0.0143	2.33	OE
8FAFT7		0.1757	-0.0078	-1.57	0.2223	-0.0112	-1.82	OE
8MQ62D		0.1804	-0.0030	-0.61	0.2308	-0.0027	-0.45	OE
8NM9GG		0.1871	0.0037	0.74	0.2399	0.0063	1.03	XX
94FNBL		0.1803	-0.0031	-0.63	0.2277	-0.0059	-0.96	OE
97HJ3N		0.1767	-0.0067	-1.36	0.2267	-0.0068	-1.11	OE
9D6AQ6		0.1760	-0.0074	-1.51	0.2247	-0.0089	-1.44	IC
9J6P37		0.1800	-0.0034	-0.70	0.2267	-0.0069	-1.12	OE
9U7RFA		0.1870	0.0036	0.72	0.2377	0.0041	0.67	OE
9X3ZKA		0.1843	0.0009	0.18	0.2350	0.0015	0.24	OE
ABR4JU		0.1813	-0.0021	-0.43	0.2293	-0.0042	-0.68	OE
AF3K26		0.1830	-0.0004	-0.09	0.2323	-0.0012	-0.20	OE
ANUM47		0.1860	0.0026	0.52	0.2410	0.0075	1.21	OE
AVZ7KK		0.1930	0.0095	1.93	0.2427	0.0091	1.48	OE
AXKNFK		0.1863	0.0029	0.59	0.2380	0.0045	0.73	OE
B3A8XK		0.1787	-0.0048	-0.97	0.2267	-0.0069	-1.12	IC
B7QVUK		0.1849	0.0014	0.29	0.2322	-0.0013	-0.22	OE
BB3Z4Y		0.1830	-0.0004	-0.09	0.2323	-0.0012	-0.20	OE
BE4FTF		0.1820	-0.0014	-0.29	0.2307	-0.0029	-0.47	IC
BXTU6J	X	0.0191	-0.1643	-33.30	0.0255	-0.2080	-33.84	XX
C2BDRY		0.1897	0.0062	1.26	0.2377	0.0041	0.67	XX
CBJ4CP		0.1863	0.0029	0.59	0.2357	0.0021	0.35	OE
DERQGE		0.1823	-0.0011	-0.22	0.2320	-0.0015	-0.25	IC
DNHCNX	X	0.1657	-0.0177	-3.59	0.2251	-0.0084	-1.37	XX
DPBTN8		0.1824	-0.0010	-0.20	0.2344	0.0009	0.14	OE
DPWMUH	X	0.2203	0.0369	7.48	0.2043	-0.0292	-4.75	OE
DQ8H6N		0.1877	0.0042	0.86	0.2387	0.0051	0.83	OE

		Sample L53			Sample L54			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
DURWZJ		0.1853	0.0019	0.39	0.2350	0.0015	0.24	OE
EMKAEE		0.1873	0.0039	0.79	0.2357	0.0021	0.35	GD
ERWWW6		0.1863	0.0029	0.58	0.2365	0.0030	0.49	OE
F3BMA7		0.1827	-0.0007	-0.15	0.2327	-0.0008	-0.13	OE
F7HPMQ		0.1870	0.0036	0.72	0.2373	0.0038	0.62	XX
F83F7G		0.1847	0.0012	0.25	0.2343	0.0008	0.13	OE
FHLV9J		0.1830	-0.0004	-0.09	0.2307	-0.0029	-0.47	XX
FLPM3H		0.1857	0.0022	0.45	0.2310	-0.0025	-0.41	OE
FUF98U	X	0.1755	-0.0079	-1.61	0.2159	-0.0176	-2.86	OE
FVDTC9		0.1827	-0.0008	-0.16	0.2323	-0.0012	-0.20	OE
FX43C2		0.1820	-0.0014	-0.29	0.2313	-0.0022	-0.36	OE
FXL2ND		0.1816	-0.0018	-0.37	0.2321	-0.0014	-0.23	IC
GCGP9C		0.1847	0.0012	0.25	0.2370	0.0035	0.56	OE
GCHG6Y		0.1840	0.0006	0.12	0.2327	-0.0009	-0.14	GD
GEHW8V		0.1873	0.0039	0.79	0.2440	0.0105	1.70	OE
GFGN8H		0.1801	-0.0033	-0.68	0.2262	-0.0073	-1.19	WD
GKL4LX		0.1893	0.0059	1.20	0.2423	0.0088	1.43	OE
GN7C3K		0.1835	0.0001	0.02	0.2340	0.0005	0.07	OE
GRBXWC		0.1849	0.0015	0.30	0.2384	0.0049	0.80	OE
GT7WDC		0.1833	-0.0001	-0.02	0.2367	0.0031	0.51	OE
GVE4RC		0.1858	0.0024	0.48	0.2443	0.0108	1.76	OE
GWQ9C2		0.1790	-0.0044	-0.90	0.2273	-0.0062	-1.01	OE
H2VRLE		0.1880	0.0046	0.93	0.2403	0.0068	1.10	OE
HYPF2X		0.1830	-0.0005	-0.09	0.2327	-0.0008	-0.13	OE
J68JCW		0.1823	-0.0011	-0.22	0.2310	-0.0025	-0.41	OE
JDZAR8		0.1823	-0.0011	-0.22	0.2360	0.0025	0.40	OE
JHBTQ7		0.1771	-0.0063	-1.28	0.2281	-0.0055	-0.89	GD
JNZ9GY		0.1940	0.0106	2.14	0.2465	0.0130	2.11	IC
JUVQ9W		0.1750	-0.0084	-1.71	0.2280	-0.0055	-0.90	OE
JVHBKN	X	0.1700	-0.0134	-2.72	0.2130	-0.0205	-3.34	DR
JXTDZZ		0.1852	0.0017	0.35	0.2373	0.0037	0.61	OE
JY4UQT		0.1839	0.0004	0.09	0.2303	-0.0033	-0.53	OE
K734WB		0.1840	0.0006	0.12	0.2337	0.0001	0.02	GD
KE88UT		0.1791	-0.0043	-0.87	0.2273	-0.0062	-1.01	OE
KG2CFN		0.1867	0.0032	0.66	0.2340	0.0005	0.07	OE
KTUBDC		0.1900	0.0066	1.33	0.2423	0.0088	1.43	WD
KWBGMZ		0.1790	-0.0044	-0.90	0.2280	-0.0055	-0.90	OE
L238T3		0.1831	-0.0004	-0.07	0.2340	0.0005	0.08	OE
L6HXWC		0.1787	-0.0048	-0.97	0.2257	-0.0079	-1.28	IC
LQ2YYX		0.1811	-0.0023	-0.47	0.2291	-0.0045	-0.72	OE
LT78VV		0.1743	-0.0092	-1.86	0.2287	-0.0049	-0.79	OE
LU7FD9		0.1903	0.0069	1.40	0.2410	0.0075	1.21	OE
LZ8ZX4		0.1827	-0.0007	-0.14	0.2357	0.0022	0.35	OE
MENHU9		0.1783	-0.0051	-1.03	0.2230	-0.0105	-1.71	IC
MGF3NP		0.1907	0.0072	1.47	0.2437	0.0101	1.65	DR
MT7C7X	*	0.1801	-0.0034	-0.68	0.2184	-0.0151	-2.46	AE
N7AKJY		0.1843	0.0009	0.18	0.2350	0.0015	0.24	OE

		Sample L53			Sample L54			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
N8HW22		0.1870	0.0036	0.72	0.2323	-0.0012	-0.20	XX
NA48WU	*	0.1733	-0.0101	-2.05	0.2267	-0.0069	-1.12	OE
ND7N33		0.1817	-0.0018	-0.36	0.2323	-0.0012	-0.20	IC
NFD7TU		0.1800	-0.0034	-0.70	0.2300	-0.0035	-0.58	OE
NFDB3W		0.1728	-0.0106	-2.15	0.2199	-0.0136	-2.21	OE
NH4WZJ		0.1802	-0.0032	-0.65	0.2308	-0.0028	-0.45	OE
P972A9		0.1840	0.0006	0.12	0.2330	-0.0005	-0.09	OE
PWVT6V	X	0.2233	0.0399	8.08	0.2800	0.0465	7.56	GD
PWW6WN		0.1853	0.0019	0.39	0.2370	0.0035	0.56	AE
Q3U7JV		0.1801	-0.0034	-0.68	0.2353	0.0017	0.28	OE
Q8QV3N	X	0.1644	-0.0190	-3.85	0.2067	-0.0268	-4.36	OE
QDWW8X		0.1860	0.0026	0.52	0.2380	0.0045	0.73	IC
QLWWTC		0.1757	-0.0078	-1.57	0.2263	-0.0072	-1.17	OE
QN283U		0.1777	-0.0058	-1.17	0.2337	0.0001	0.02	GD
QTA9YR	X	0.1671	-0.0164	-3.32	0.2146	-0.0189	-3.07	OE
R4RPDA		0.1833	-0.0001	-0.02	0.2287	-0.0049	-0.79	OE
R7FLUX		0.1918	0.0084	1.70	0.2404	0.0068	1.11	OE
R7JLZH		0.1747	-0.0088	-1.78	0.2220	-0.0115	-1.88	OE
R8Q4YE	*	0.1884	0.0049	1.00	0.2289	-0.0047	-0.76	OE
R9KR74		0.1867	0.0032	0.66	0.2330	-0.0005	-0.09	OE
RP7G9W		0.1800	-0.0034	-0.70	0.2300	-0.0035	-0.58	OE
RU2L4V		0.1827	-0.0008	-0.16	0.2310	-0.0025	-0.41	OE
TK9CW4		0.1797	-0.0038	-0.76	0.2300	-0.0035	-0.58	OE
TYDC7V		0.1834	0.0000	0.00	0.2334	-0.0001	-0.02	IC
UBH6XX		0.1860	0.0025	0.51	0.2317	-0.0018	-0.29	IC
UC9VRL		0.1809	-0.0025	-0.50	0.2296	-0.0040	-0.65	OE
UTKNQF		0.1787	-0.0048	-0.97	0.2330	-0.0005	-0.09	OE
VDF3JX		0.1912	0.0078	1.57	0.2411	0.0076	1.23	OE
VDK6FH		0.1830	-0.0004	-0.09	0.2380	0.0045	0.73	OE
VLEEXT		0.1883	0.0048	0.98	0.2400	0.0065	1.05	OE
VQPGVG	X	0.1787	-0.0047	-0.95	0.2065	-0.0270	-4.40	OE
VWFDMM		0.1777	-0.0058	-1.17	0.2243	-0.0092	-1.50	OE
WQREUJ		0.1817	-0.0018	-0.36	0.2343	0.0008	0.13	OE
WXMW6W		0.1900	0.0066	1.34	0.2366	0.0031	0.50	OE
X6GNLN		0.1799	-0.0035	-0.71	0.2318	-0.0017	-0.28	OE
X7D3B3		0.1910	0.0076	1.53	0.2347	0.0011	0.18	GD
XDDCNM	X	0.1794	-0.0040	-0.81	0.2441	0.0106	1.72	DR
XJ2LXB		0.1937	0.0102	2.07	0.2430	0.0095	1.54	OE
XL4EYV		0.1837	0.0002	0.05	0.2320	-0.0015	-0.25	WD
XXGUP2		0.1703	-0.0131	-2.65	0.2197	-0.0139	-2.26	OE
XXHGBL		0.1820	-0.0014	-0.29	0.2323	-0.0012	-0.20	IC
Y2DMEP		0.1730	-0.0104	-2.11	0.2173	-0.0162	-2.64	OE
YGQ4CK		0.1850	0.0016	0.32	0.2357	0.0021	0.35	OE
YPLHDE		0.1847	0.0012	0.25	0.2320	-0.0015	-0.25	XX
YTJC8F		0.1803	-0.0031	-0.63	0.2253	-0.0082	-1.34	OE
YUH43W		0.1878	0.0044	0.89	0.2410	0.0075	1.21	OE
YUHKBT		0.1907	0.0072	1.47	0.2380	0.0045	0.73	OE

Fasteners and Metals Interlaboratory Testing Program

Analysis 178

Carbon & Low Alloy Steel, Element #9
COPPER (Cu)

WebCode	Data Flag	Sample L53 Lab Mean	Sample L53 Diff. from Grand Mean	Sample L53 CPV	Sample L54 Lab Mean	Sample L54 Diff. from Grand Mean	Sample L54 CPV	Method
Z69U7T		0.1880	0.0046	0.93	0.2400	0.0065	1.05	OE
Z7746P		0.1836	0.0001	0.03	0.2339	0.0004	0.06	OE
ZD4CPP		0.1813	-0.0021	-0.43	0.2304	-0.0032	-0.52	XX

Summary Statistics

	Sample L53		Sample L54	
Grand Means	0.1834	Percent	0.2335	Percent
Stnd Dev Btwn Labs	0.0049	Percent	0.0061	Percent

Samples L53, L54 : AISI 8740 - UNS G87400, AISI 8740 - UNS G87400

Statistics based on 129 of 144 reporting participants

Key to Method Codes Reported by Participants

AE	Spectrometry - Atomic Emission (AES)	DR	Spectrometry - Direct Reading OE (DROES)
GD	Spectrometry - Glow Discharge (GDS)	IC	Spectrometry - Inductively Coupled Plasma (ICP)
OE	Spectrometry - Optical Emission (OES)	WD	X-Ray Fluorescence - Wavelength Dispersive (WDX)
XX	Please Indicate Method Used for Current Element		

Comments on Assigned Data Flags for Test #178

2TCA8L (X) - Data for sample L54 are low.

47FH9B (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample L54.

7YB3J6 (X) - Extreme data.

BXTU6J (X) - Extreme data.

DNHCNX (X) - Data for sample L53 are low.

DPWMUH (X) - Data for sample L53 are high and data for sample L54 are low.

FUF98U (X) - Data for sample L54 are low.

JVHBKN (X) - Data for sample L54 are low.

PWVT6V (X) - Data for both samples are high. Inconsistent within the determinations of sample L53.

Q8QV3N (X) - Data for both samples are low.

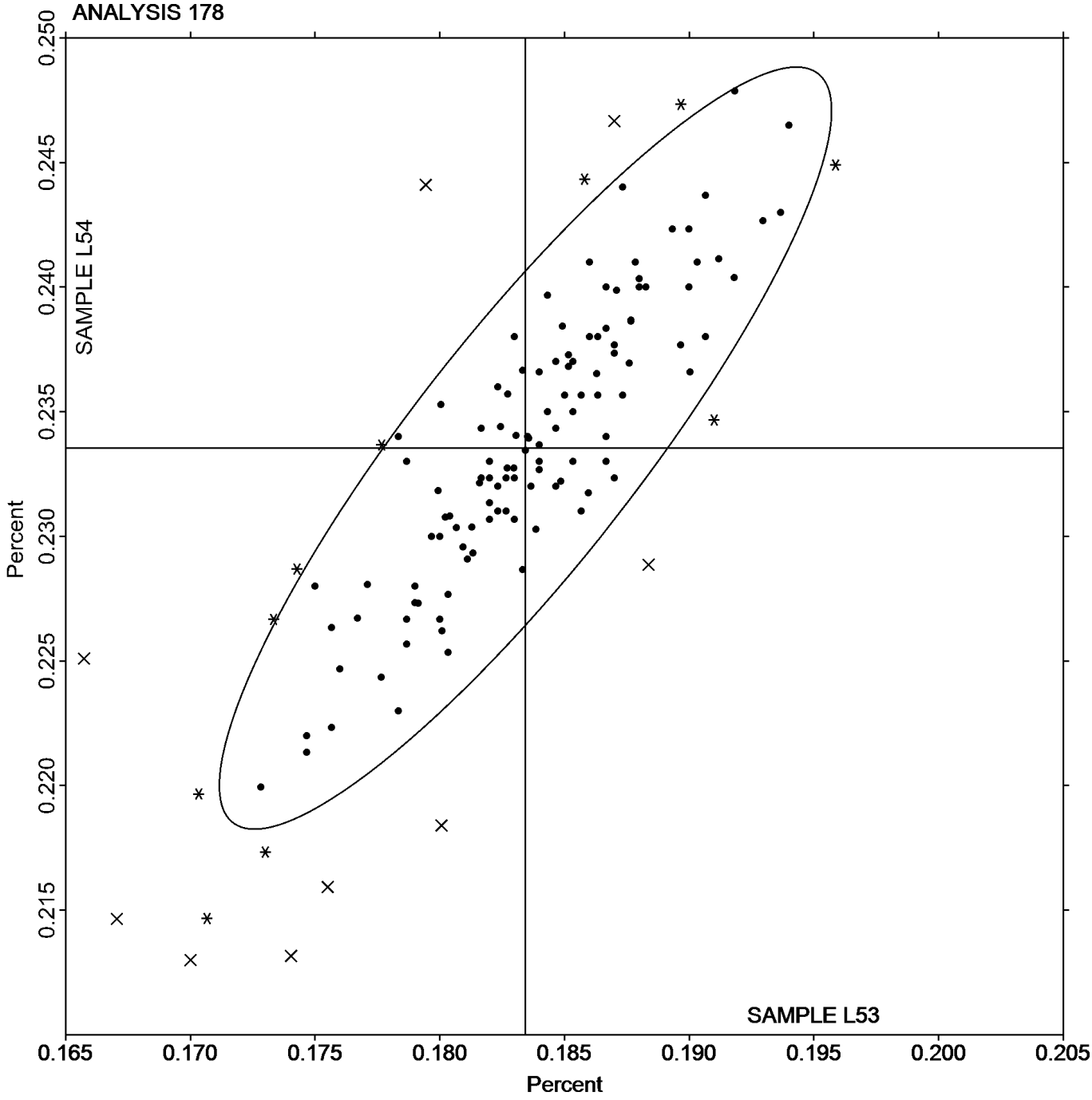
QTA9YR (X) - Data for both samples are low.

VQPGVG (X) - Data for sample L54 are low.

XDDCNM (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample L54.

SAMPLE L53
0.1834 Percent

SAMPLE L54
0.2335 Percent



		Sample L53			Sample L54			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
2BBT64		0.0200	-0.0002	-0.13	0.0350	-0.0004	-0.26	OE
2CWLBD		0.0200	-0.0002	-0.13	0.0357	0.0003	0.17	OE
2G2PUK		0.0205	0.0004	0.32	0.0359	0.0005	0.30	OE
2GL88T	X	0.0339	0.0137	11.67	0.0448	0.0094	6.11	OE
2TCA8L		0.0203	0.0001	0.12	0.0352	-0.0002	-0.13	OE
2YKK9T		0.0203	0.0001	0.12	0.0352	-0.0002	-0.13	OE
3489FD		0.0210	0.0008	0.72	0.0350	-0.0004	-0.26	OE
3Q6743		0.0205	0.0003	0.26	0.0365	0.0011	0.69	OE
47FH9B		0.0190	-0.0012	-0.98	0.0343	-0.0011	-0.70	GD
49XXFG		0.0192	-0.0009	-0.79	0.0333	-0.0021	-1.35	OE
4FFBEF		0.0188	-0.0014	-1.15	0.0342	-0.0012	-0.76	OE
4T3WUA		0.0227	0.0025	2.13	0.0367	0.0013	0.82	IC
4UG2ZK		0.0205	0.0003	0.29	0.0346	-0.0008	-0.53	OE
66GWUA		0.0211	0.0009	0.77	0.0370	0.0016	1.06	OE
69WXVD		0.0211	0.0009	0.80	0.0360	0.0006	0.41	AE
6NWLC8		0.0217	0.0015	1.28	0.0363	0.0009	0.61	XX
6UUCKB		0.0220	0.0018	1.56	0.0380	0.0026	1.69	OE
77U9EQ	*	0.0213	0.0012	1.00	0.0320	-0.0034	-2.20	OE
7ZK8XT		0.0209	0.0007	0.63	0.0363	0.0009	0.56	OE
8FAFT7		0.0197	-0.0005	-0.42	0.0337	-0.0017	-1.13	OE
8MQ62D		0.0209	0.0008	0.66	0.0363	0.0009	0.56	OE
8NM9GG		0.0195	-0.0007	-0.56	0.0345	-0.0009	-0.57	XX
94FNBL		0.0206	0.0004	0.38	0.0369	0.0015	0.98	OE
97HJ3N		0.0206	0.0004	0.38	0.0346	-0.0008	-0.53	OE
9D6AQ6		0.0215	0.0013	1.11	0.0363	0.0009	0.56	IC
9J6P37		0.0210	0.0008	0.72	0.0383	0.0029	1.91	OE
9U7RFA	X	0.0113	-0.0089	-7.52	0.0265	-0.0089	-5.81	OE
9X3ZKA		0.0187	-0.0015	-1.27	0.0327	-0.0027	-1.79	OE
ABR4JU		0.0227	0.0025	2.13	0.0368	0.0014	0.91	OE
AF3K26		0.0203	0.0002	0.15	0.0370	0.0016	1.04	OE
ANUM47		0.0204	0.0002	0.21	0.0360	0.0006	0.41	OE
AVZ7KK		0.0208	0.0006	0.52	0.0374	0.0020	1.28	OE
AXKNFK		0.0183	-0.0018	-1.55	0.0323	-0.0031	-2.00	OE
B3A8XK	*	0.0214	0.0012	1.05	0.0323	-0.0031	-2.03	IC
B7QVUK		0.0189	-0.0012	-1.04	0.0350	-0.0004	-0.24	OE
BB3Z4Y		0.0199	-0.0003	-0.25	0.0359	0.0005	0.34	OE
BE4FTF		0.0210	0.0008	0.72	0.0350	-0.0004	-0.26	IC
BXTU6J	X	0.0272	0.0070	5.98	0.0185	-0.0169	-11.03	XX
C2BDRY		0.0187	-0.0015	-1.27	0.0330	-0.0024	-1.57	XX
CBJ4CP		0.0207	0.0005	0.43	0.0360	0.0006	0.41	OE
DD48L9		0.0217	0.0015	1.28	0.0360	0.0006	0.39	XX
DERQGE		0.0199	-0.0002	-0.19	0.0353	-0.0001	-0.07	AA
DNHCNX	X	0.0203	0.0002	0.15	0.0397	0.0043	2.80	XX
DPBTN8	X	0.0142	-0.0060	-5.06	0.0318	-0.0036	-2.37	XX
DQ8H6N		0.0193	-0.0009	-0.73	0.0343	-0.0011	-0.70	OE
DURWZJ		0.0200	-0.0002	-0.13	0.0352	-0.0002	-0.11	OE
EMKAEE		0.0196	-0.0006	-0.50	0.0353	-0.0001	-0.07	GD

		Sample L53			Sample L54			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
ERWWW6		0.0205	0.0003	0.29	0.0349	-0.0005	-0.35	OE
F3BMA7		0.0191	-0.0010	-0.87	0.0325	-0.0029	-1.90	OE
F7HPMQ		0.0220	0.0019	1.59	0.0382	0.0028	1.84	AE
F83F7G		0.0195	-0.0007	-0.59	0.0344	-0.0010	-0.63	OE
FHLV9J		0.0210	0.0008	0.72	0.0370	0.0016	1.04	XX
FLPM3H		0.0206	0.0004	0.35	0.0371	0.0017	1.13	OE
FUF98U	*	0.0231	0.0030	2.53	0.0357	0.0003	0.19	OE
FVDTC9		0.0207	0.0005	0.46	0.0363	0.0009	0.56	OE
FX43C2		0.0199	-0.0002	-0.19	0.0354	0.0000	-0.03	OE
FXL2ND		0.0197	-0.0004	-0.36	0.0354	0.0000	-0.03	IC
GCGP9C		0.0207	0.0005	0.43	0.0367	0.0013	0.82	OE
GCHG6Y	X	0.0258	0.0056	4.79	0.0399	0.0045	2.93	GD
GEHW8V		0.0196	-0.0005	-0.45	0.0340	-0.0014	-0.89	OE
GFGN8H		0.0213	0.0011	0.94	0.0355	0.0001	0.04	OE
GKL4LX		0.0185	-0.0016	-1.38	0.0338	-0.0016	-1.03	OE
GN7C3K		0.0203	0.0001	0.12	0.0352	-0.0002	-0.16	OE
GRBXWC		0.0183	-0.0019	-1.61	0.0326	-0.0028	-1.85	OE
GT7WDC		0.0182	-0.0019	-1.63	0.0332	-0.0022	-1.44	OE
GVE4RC		0.0207	0.0005	0.46	0.0355	0.0001	0.08	OE
GWQ9C2	*	0.0219	0.0017	1.45	0.0339	-0.0015	-0.98	OE
H2VRLE	*	0.0167	-0.0035	-2.97	0.0313	-0.0041	-2.66	OE
HYPF2X		0.0207	0.0006	0.49	0.0358	0.0004	0.28	OE
J68JCW		0.0210	0.0008	0.69	0.0374	0.0020	1.32	OE
JDZAR8		0.0217	0.0015	1.28	0.0370	0.0016	1.04	OE
JHBTQ7		0.0192	-0.0009	-0.79	0.0349	-0.0005	-0.33	GD
JNZ9GY	X	0.0235	0.0033	2.84	0.0375	0.0021	1.37	IC
JUVQ9W		0.0213	0.0012	1.00	0.0383	0.0029	1.91	OE
JVHBKN		0.0213	0.0012	1.00	0.0380	0.0026	1.69	DR
JXTDZZ		0.0195	-0.0006	-0.54	0.0342	-0.0012	-0.79	OE
JY4UQT		0.0196	-0.0006	-0.47	0.0356	0.0002	0.15	OE
K734WB		0.0180	-0.0022	-1.83	0.0347	-0.0007	-0.48	GD
KE88UT		0.0223	0.0022	1.84	0.0381	0.0026	1.73	XX
KG2CFN		0.0181	-0.0020	-1.72	0.0327	-0.0027	-1.74	OE
KTUBDC		0.0170	-0.0032	-2.68	0.0313	-0.0041	-2.66	OE
KWBGMZ	X	0.0233	0.0032	2.70	0.0410	0.0056	3.65	OE
L238T3		0.0192	-0.0010	-0.81	0.0351	-0.0003	-0.18	OE
LQ2YYX	X	0.0165	-0.0036	-3.08	0.0327	-0.0027	-1.78	OE
LT78VV		0.0219	0.0018	1.51	0.0380	0.0026	1.71	OE
LU7FD9		0.0194	-0.0008	-0.67	0.0339	-0.0015	-0.98	OE
LXYNF3		0.0203	0.0002	0.15	0.0360	0.0006	0.39	OE
LZ8ZX4	*	0.0200	-0.0002	-0.16	0.0384	0.0030	1.95	OE
MENHU9		0.0207	0.0005	0.43	0.0353	-0.0001	-0.05	IC
MGF3NP		0.0213	0.0012	1.00	0.0373	0.0019	1.26	DR
MT7C7X		0.0202	0.0000	0.01	0.0352	-0.0002	-0.11	AE
N7AKJY		0.0200	-0.0002	-0.13	0.0350	-0.0004	-0.26	OE
N8HW22		0.0197	-0.0005	-0.42	0.0347	-0.0007	-0.48	XX
ND7N33		0.0185	-0.0016	-1.38	0.0340	-0.0014	-0.92	IC

		Sample L53			Sample L54			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
NFD7TU		0.0217	0.0015	1.28	0.0360	0.0006	0.39	OE
NFDB3W		0.0198	-0.0003	-0.28	0.0342	-0.0012	-0.81	OE
NH4WZJ		0.0191	-0.0010	-0.87	0.0348	-0.0006	-0.37	OE
NQCGWZ		0.0212	0.0010	0.86	0.0365	0.0011	0.71	OE
NTFXT6		0.0210	0.0008	0.72	0.0360	0.0006	0.39	XX
P972A9		0.0200	-0.0002	-0.13	0.0357	0.0003	0.17	OE
PWVT6V	X	0.0270	0.0068	5.81	0.0483	0.0129	8.43	GD
PWW6WN		0.0196	-0.0006	-0.47	0.0333	-0.0021	-1.40	AE
Q3U7JV		0.0193	-0.0008	-0.71	0.0331	-0.0023	-1.49	XX
Q8QV3N		0.0205	0.0004	0.32	0.0343	-0.0011	-0.72	OE
QDWW8X		0.0190	-0.0012	-1.01	0.0349	-0.0005	-0.31	IC
QLWWTC	X	0.0183	-0.0018	-1.55	0.0260	-0.0094	-6.14	OE
QN283U		0.0200	-0.0002	-0.13	0.0350	-0.0004	-0.26	GD
QTA9YR		0.0189	-0.0012	-1.06	0.0358	0.0004	0.25	OE
R4RPDA	X	0.0153	-0.0049	-4.13	0.0346	-0.0008	-0.50	OE
R7FLUX		0.0194	-0.0008	-0.67	0.0337	-0.0017	-1.11	OE
R7JLZH		0.0213	0.0012	1.00	0.0380	0.0026	1.69	OE
R8Q4YE		0.0200	-0.0001	-0.11	0.0347	-0.0007	-0.44	OE
R9KR74		0.0205	0.0004	0.32	0.0357	0.0003	0.21	OE
RP7G9W		0.0230	0.0028	2.41	0.0380	0.0026	1.69	OE
RTUNYK		0.0203	0.0002	0.15	0.0377	0.0023	1.48	XX
RU2L4V		0.0220	0.0018	1.56	0.0370	0.0016	1.04	OE
TK9CW4		0.0191	-0.0010	-0.87	0.0348	-0.0006	-0.39	OE
TW84N3		0.0223	0.0022	1.85	0.0373	0.0019	1.26	DR
TYDC7V		0.0221	0.0019	1.62	0.0358	0.0004	0.28	IC
UBH6XX		0.0203	0.0002	0.15	0.0355	0.0001	0.04	IC
UC9VRL		0.0201	-0.0001	-0.06	0.0360	0.0006	0.37	OE
UTKNQF		0.0193	-0.0008	-0.70	0.0347	-0.0007	-0.48	OE
VDF3JX		0.0189	-0.0012	-1.04	0.0328	-0.0026	-1.70	OE
VDK6FH		0.0214	0.0013	1.08	0.0364	0.0010	0.67	OE
VLEEXT		0.0196	-0.0006	-0.50	0.0362	0.0008	0.50	OE
VQPGVG		0.0187	-0.0015	-1.27	0.0347	-0.0007	-0.44	OE
VWFDMM		0.0204	0.0002	0.21	0.0347	-0.0007	-0.48	OE
WXMW6W		0.0213	0.0012	1.00	0.0367	0.0013	0.87	OE
WYXDDT		0.0213	0.0012	1.00	0.0357	0.0003	0.17	XX
X6GNLN		0.0200	-0.0002	-0.16	0.0367	0.0013	0.82	IC
X7D3B3		0.0190	-0.0012	-0.98	0.0353	-0.0001	-0.05	GD
XDDCNM	*	0.0219	0.0018	1.51	0.0340	-0.0014	-0.92	DR
XJ2LXB	*	0.0213	0.0011	0.94	0.0331	-0.0023	-1.53	OE
XL4EYV		0.0202	0.0000	0.04	0.0354	0.0000	-0.03	OE
XXGUP2		0.0183	-0.0019	-1.58	0.0328	-0.0026	-1.68	OE
XXHGBL		0.0200	-0.0002	-0.13	0.0365	0.0011	0.69	IC
Y2DMEP		0.0210	0.0009	0.74	0.0365	0.0011	0.71	OE
YGQ4CK		0.0183	-0.0018	-1.55	0.0330	-0.0024	-1.57	OE
YPLHDE		0.0183	-0.0018	-1.55	0.0333	-0.0021	-1.35	XX
YUH43W		0.0207	0.0006	0.49	0.0376	0.0022	1.44	OE
YUHKBT		0.0199	-0.0002	-0.19	0.0353	-0.0001	-0.05	OE

Fasteners and Metals Interlaboratory Testing Program

Analysis 179

Carbon & Low Alloy Steel, Element #10
ALUMINUM (Al)

WebCode	Data Flag	Sample L53 Lab Mean	Sample L53 Diff. from Grand Mean	Sample L53 CPV	Sample L54 Lab Mean	Sample L54 Diff. from Grand Mean	Sample L54 CPV	Method
Z69U7T		0.0195	-0.0007	-0.56	0.0346	-0.0008	-0.50	OE
Z7746P		0.0191	-0.0010	-0.87	0.0345	-0.0009	-0.59	OE
ZD4CPP		0.0212	0.0010	0.85	0.0375	0.0021	1.38	XX

Summary Statistics

	Sample L53		Sample L54	
Grand Means	0.0202	Percent	0.0354	Percent
Stnd Dev Btwn Labs	0.0012	Percent	0.0015	Percent

Samples L53, L54 : AISI 8740 - UNS G87400, AISI 8740 - UNS G87400

Statistics based on 125 of 144 reporting participants

Key to Method Codes Reported by Participants

AA	Spectrometry - Atomic Absorption (AAS)	AE	Spectrometry - Atomic Emission (AES)
DR	Spectrometry - Direct Reading OE (DROES)	GD	Spectrometry - Glow Discharge (GDS)
IC	Spectrometry - Inductively Coupled Plasma (ICP)	OE	Spectrometry - Optical Emission (OES)
XX	Please Indicate Method Used for Current Element		

Comments on Assigned Data Flags for Test #179

2GL88T (X) - Data for both samples are high. Inconsistent within the determinations of sample L53.

9U7RFA (X) - Data for both samples are low.

BXTU6J (X) - Data for sample L53 are high and data for sample L54 are low. Inconsistent within the determinations of sample L53.

DNHCNX (X) - Data for sample L54 are high.

DPBTN8 (X) - Data for sample L53 are low.

GCHG6Y (X) - Data for both samples are high. Inconsistent within the determinations of sample L53.

JNZ9GY (X) - Data for sample L53 are high.

KWBGMZ (X) - Data for sample L54 are high.

LQ2YYX (X) - Data for sample L53 are low. Inconsistent within the determinations of sample L54.

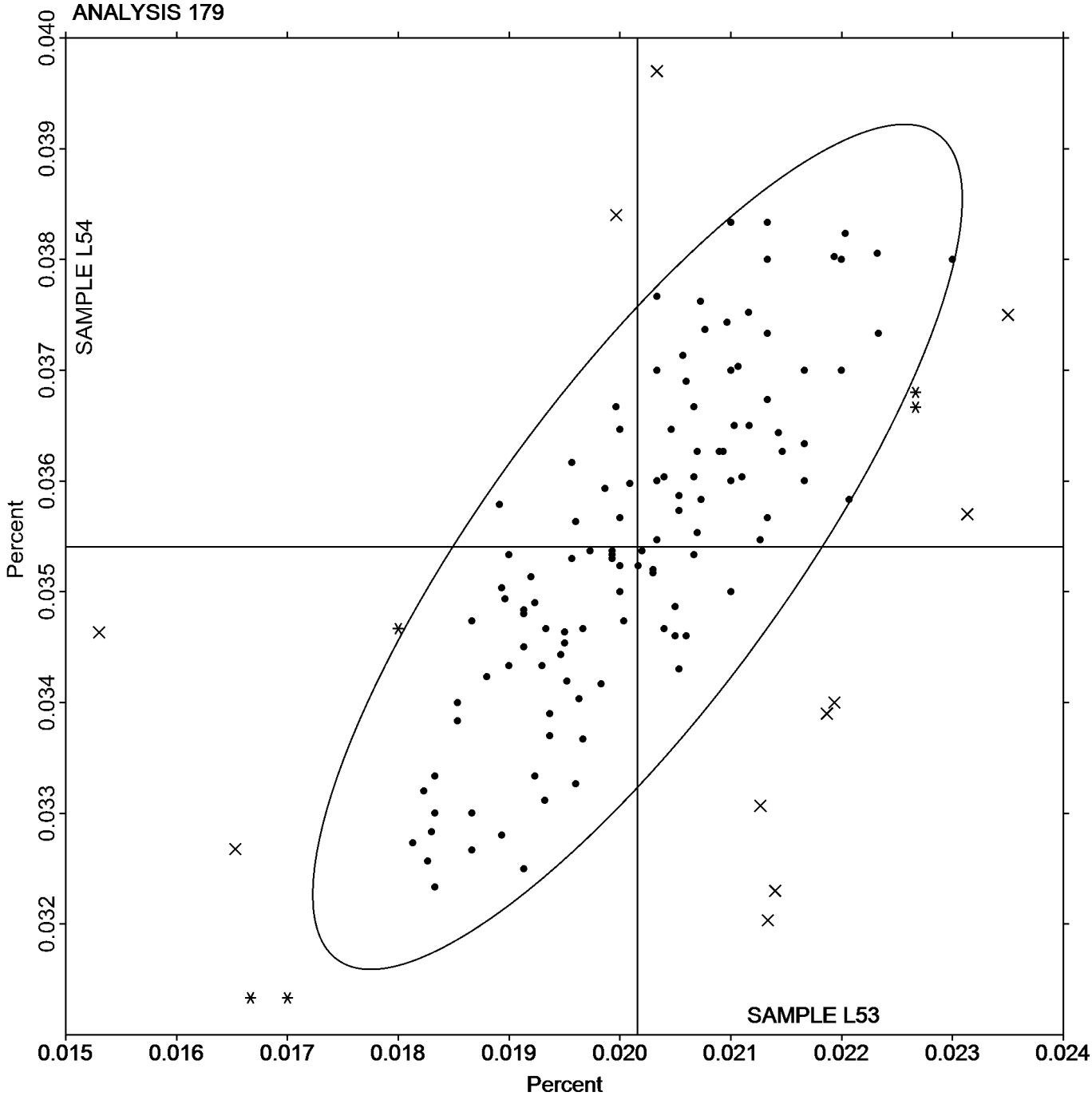
PWVT6V (X) - Data for both samples are high.

QLWWTC (X) - Data for sample L54 are low.

R4RPDA (X) - Data for sample L53 are low. Inconsistent within the determinations of sample L54.

SAMPLE L53
0.0202 Percent

SAMPLE L54
0.0354 Percent



-End of Report-

