Collaborative Testing Services, Inc.

Fasteners & Metals Interlaboratory Testing Program

Summary Report Cycle 117, 1st Qtr 2017

About the Metals Program About CTS Key to Tables and Graphs

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.

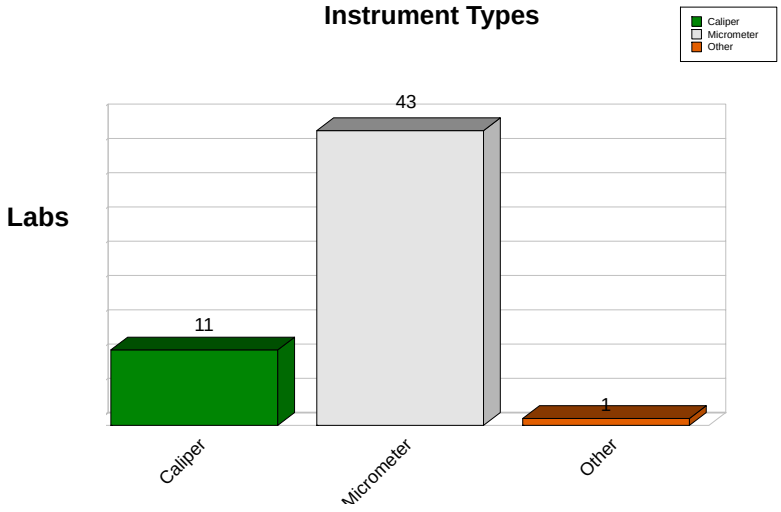
Fasteners and Metals Interlaboratory Testing Program

Analysis 101

Dimensional: Outside Diameter of Plain Plug Gage
ISO GUM

Cycle 117
1st Qtr 2017

During Cycle 117, CTS conducted the Analysis #101 - Round Dimensional. For this test all participants received two samples I41 and I42 with nominal diameters; 0.3750 in. and 0.3754 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. 55 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 = 0.3754 in.

				Sample I41		**Sample I42**		
WebCode	Data Flag (if assigned)	Reference Uncertainty (Uref)	Expanded Uncertainty (Ulab)	Lab Mean (Xlab)	Performance Statistic (En1)	Lab Mean (Xlab)	Performance Statistic (En2)	Instrument
2697DP		0.00004	0.00083	0.37490	-0.12	0.37510	-0.36	Micrometer
28VUPP		0.00004	0.00047	0.37495	-0.12	0.37532	-0.18	Micrometer
2ZDGN6		0.00004	0.00001	0.37498	-0.38	0.37539	-0.15	Micrometer
39KFX8		0.00004	0.00010	0.37490	-0.93	0.37530	-0.93	Micrometer
3BCCNL		0.00004	0.00009	0.37492	-0.82	0.37532	-0.89	Micrometer
3DWG3B		0.00004	0.00062	0.37480	-0.32	0.37490	-0.80	Caliper
3PBCHB		0.00004	0.00020	0.37498	-0.10	0.37540	0.00	Micrometer
4FJHJJ		0.00004	0.00130	0.37450	-0.38	0.37500	-0.31	Caliper
76W3NF		0.00004	0.00210	0.37500	0.00	0.37500	-0.19	Caliper
76W6EJ		0.00004	0.00021	0.37494	-0.28	0.37536	-0.19	Micrometer
8Y2Q7N		0.00004	0.00040	0.37497	-0.07	0.37537	-0.07	Micrometer
926JZM		0.00004	0.00116	0.37450	-0.43	0.37500	-0.34	Caliper
926QY9		0.00004	0.19900	0.37480	0.00	0.37520	0.00	Micrometer
9D2PUK		0.00004	0.00024	0.37485	-0.62	0.37525	-0.62	Micrometer
9DH7PD		0.00004	0.00059	0.37480	-0.34	0.37520	-0.34	Micrometer
AE8J3P		0.00004	0.00080	0.37500	0.00	0.37550	0.12	Micrometer
AHM97Y		0.00004	0.00170	0.37498	-0.01	0.37546	0.04	Caliper
AVGDKR		0.00004	0.00016	0.37500	0.00	0.37539	-0.04	Micrometer
BUXUDY	X	0.00004	0.00030	0.37450	-1.65	0.37500	-1.32	Micrometer
BZ6PQ8		0.00004	0.00030	0.37492	-0.26	0.37532	-0.26	Micrometer
CRKTJC	X	0.00004	0.00007	0.37514	1.70	0.37552	1.46	Micrometer
D7LMTZ		0.00004	0.00020	0.37500	0.00	0.37538	-0.10	Micrometer
DHVEZ7		0.00004	Not Reported	0.37450		0.37500		Caliper
DTWXGZ	X	0.00004	0.00015	0.37500	0.00	0.37520	-1.29	Micrometer
EQ9N6E		0.00004	0.00100	0.37480	-0.20	0.37520	-0.20	Caliper
FE9LW3		0.00004	0.00100	0.37498	-0.02	0.37546	0.06	Micrometer
FP8DMF		0.00004	0.00118	0.37480	-0.17	0.37520	-0.17	Caliper
FXMRR8		0.00004	0.00008	0.37498	-0.18	0.37535	-0.51	Micrometer
FYV2LP		0.00004	0.00070	0.37482	-0.26	0.37523	-0.24	Micrometer
HY3ACM		0.00004	0.00092	0.37450	-0.54	0.37500	-0.43	Caliper
JZGPRA		0.00004	0.00023	0.37496	-0.17	0.37535	-0.20	Micrometer
KEA2HP		0.00004	0.00020	0.37500	0.00	0.37530	-0.49	Micrometer
ML4W8Y		0.00004	0.00007	0.37500	0.00	0.37540	0.00	Micrometer

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

Xref1 = 0.3750 in.

Xref2 = 0.3754 in.

WebCode	Data Flag (if assigned)	Reference Uncertainty (Uref)	Expanded Uncertainty (Ulab)	Sample I41 Lab Mean (Xlab)	Sample I41 Performance Statistic (En1)	Sample I42 Lab Mean (Xlab)	Sample I42 Performance Statistic (En2)	Instrument
MMYF8F	X	0.00004	0.00013	0.37465	-2.68	0.37504	-2.73	Micrometer
N9UPTE		0.00004	0.00050	0.37500	0.00	0.37530	-0.20	Micrometer
NJXPN7		0.00004	0.00019	0.37500	0.00	0.37536	-0.21	Micrometer
P6P7KK	X	0.00004	0.00005	0.37490	-1.56	0.37530	-1.56	Micrometer
PAZJZX		0.00004	Not Reported	0.37490		0.37532		Micrometer
PKLH22		0.00004	0.00150	0.37450	-0.33	0.37500	-0.27	Caliper
Q9RJPP		0.00004	0.00050	0.37500	0.00	0.37540	0.00	Micrometer
QF9YDT		0.00004	Not Reported	0.37450		0.37500		Caliper
QR47BW		0.00004	Not Reported	0.37499		0.37534		Micrometer
QWVKUC		0.00004	0.00200	0.37498	-0.01	0.37537	-0.02	Micrometer
RHM2RB		0.00004	Not Reported	0.37480		0.37520		Micrometer
TNVWWW		0.00004	0.00094	0.37483	-0.18	0.37510	-0.32	Micrometer
U6V6TB		0.00004	0.00020	0.37498	-0.10	0.37532	-0.39	Micrometer
UFWRG2		0.00004	0.00015	0.37490	-0.64	0.37530	-0.64	Micrometer
VXC6PH		0.00004	Not Reported	0.37499		0.37540		Micrometer
WAHVQG		0.00004	0.00015	0.37489	-0.69	0.37531	-0.58	Micrometer
X3TMWP		0.00004	0.00027	0.37493	-0.24	0.37533	-0.26	Micrometer
X8UJPQ		0.00004	0.00040	0.37498	-0.05	0.37537	-0.07	Micrometer
YDD6C4		0.00004	0.00201	0.37495	-0.02	0.37536	-0.02	Micrometer
YW68T4		0.00004	0.00020	0.37495	-0.23	0.37535	-0.27	Micrometer
ZT4QTF		0.00004	0.00030	0.37490	-0.33	0.37528	-0.40	Other
ZUVMFN	X	0.00004	0.00005	0.37490	-1.64	0.37530	-1.64	Micrometer

Summary Statistics

		Sample I41		Sample I42	
Reference Uncertainty = 0.00004 in.	Reference Diameters:	0.3750	inch	0.3754	inch

Samples I41, I42 : 52100 steel, 52100 steel

Comments on Assigned Data Flags for Test #101

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

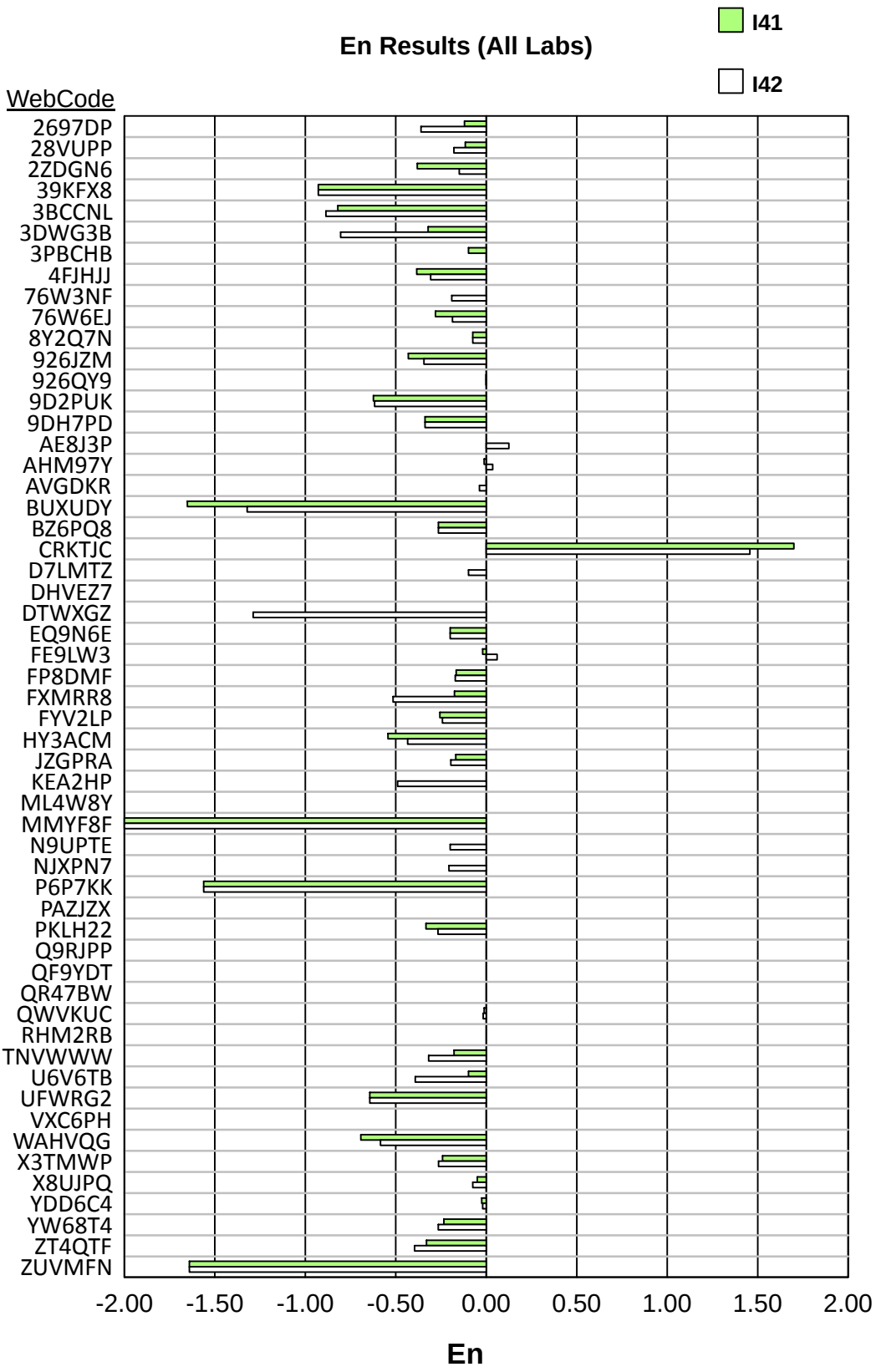
CRKTJC (X) - En value for both samples was high.

DTWXGZ (X) - En value for sample I42 was low.

MMYF8F (X) - En value for both samples was low.

P6P7KK (X) - En value for both samples was low.

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



Fasteners and Metals Interlaboratory Testing Program

Analysis 105

Tensile Strength: Lab-Machined Flat Aluminum
ASTM B557

		Sample R41			Sample R42		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
3TRLPM		47.30	-0.13	-0.22	46.00	-0.17	-0.34
4H7CMT		47.01	-0.43	-0.70	46.17	0.00	-0.01
6FYFGV	X	47.60	0.17	0.27	47.90	1.73	3.42
6GMG7W	*	49.18	1.74	2.86	47.78	1.61	3.17
7X8PJK		47.38	-0.05	-0.08	46.04	-0.13	-0.27
924TRJ		47.50	0.07	0.11	46.10	-0.07	-0.14
926QY9		47.10	-0.33	-0.55	45.90	-0.27	-0.53
98AWPR		47.30	-0.13	-0.22	46.10	-0.07	-0.14
9R2Q98	*	45.71	-1.73	-2.84	45.28	-0.89	-1.77
BDRRFQ		46.42	-1.01	-1.66	45.89	-0.28	-0.55
BM2YFZ	X	47.20	-0.23	-0.38	44.90	-1.27	-2.51
DEUGK8		47.63	0.20	0.33	46.41	0.24	0.48
DXBBLU		48.10	0.67	1.10	46.80	0.63	1.24
EKGQ8A		47.70	0.27	0.44	46.20	0.03	0.06
FBMAAD	X	45.53	-1.91	-3.13	43.29	-2.88	-5.68
FYVB8U		48.70	1.27	2.08	47.40	1.23	2.43
GFVH38		47.40	-0.03	-0.05	46.10	-0.07	-0.14
KYGFQ4		47.60	0.17	0.27	46.30	0.13	0.26
LAXRV9	*	47.48	0.05	0.08	45.52	-0.65	-1.28
P7Z6JZ		47.40	-0.03	-0.05	46.10	-0.07	-0.14
P8UYEJ		47.40	-0.03	-0.05	45.90	-0.27	-0.53
PAKWTG		47.30	-0.13	-0.22	45.80	-0.37	-0.73
PU8NPR		47.44	0.01	0.02	45.95	-0.22	-0.44
QNHZJ9		46.54	-0.90	-1.48	45.45	-0.72	-1.43
QUKKTC		47.67	0.24	0.39	46.21	0.04	0.08
R6LDMN	X	47.30	-0.13	-0.22	45.80	-0.37	-0.73
RG9WTD		46.80	-0.63	-1.04	45.70	-0.47	-0.93
RVVYGW		47.30	-0.13	-0.22	46.10	-0.07	-0.14
RZN7UE		46.90	-0.53	-0.88	45.70	-0.47	-0.93
TWKPZG		47.60	0.17	0.27	46.00	-0.17	-0.34
UWJW39		47.90	0.47	0.77	46.70	0.53	1.05
VXC6PH		47.46	0.02	0.04	46.02	-0.15	-0.29
WNZQZL		47.50	0.07	0.11	46.60	0.43	0.85
X633GX	X	38.32	-9.11	-14.97	47.31	1.14	2.25
X7BC9U		47.57	0.14	0.23	45.98	-0.19	-0.38
YH6HQC		47.50	0.07	0.11	45.90	-0.27	-0.53
YQ32CF		47.24	-0.19	-0.32	46.27	0.10	0.19
ZT4QTF		47.40	-0.03	-0.05	46.70	0.53	1.05
ZXC2X3		48.30	0.87	1.42	46.73	0.56	1.11

Summary Statistics

	Sample R41		Sample R42	
Grand Means	47.43	ksi	46.17	ksi
Stnd Dev Btwn Labs	0.61	ksi	0.51	ksi

Samples R41, R42 : 16G 6061-T6 (A), 14G 6061-T6 (B)

Statistics based on 34 of 39 reporting participants

Comments on Assigned Data Flags for Test #105

6FYFGV (X) - Inconsistent in testing between samples. Data for sample R42 are high.

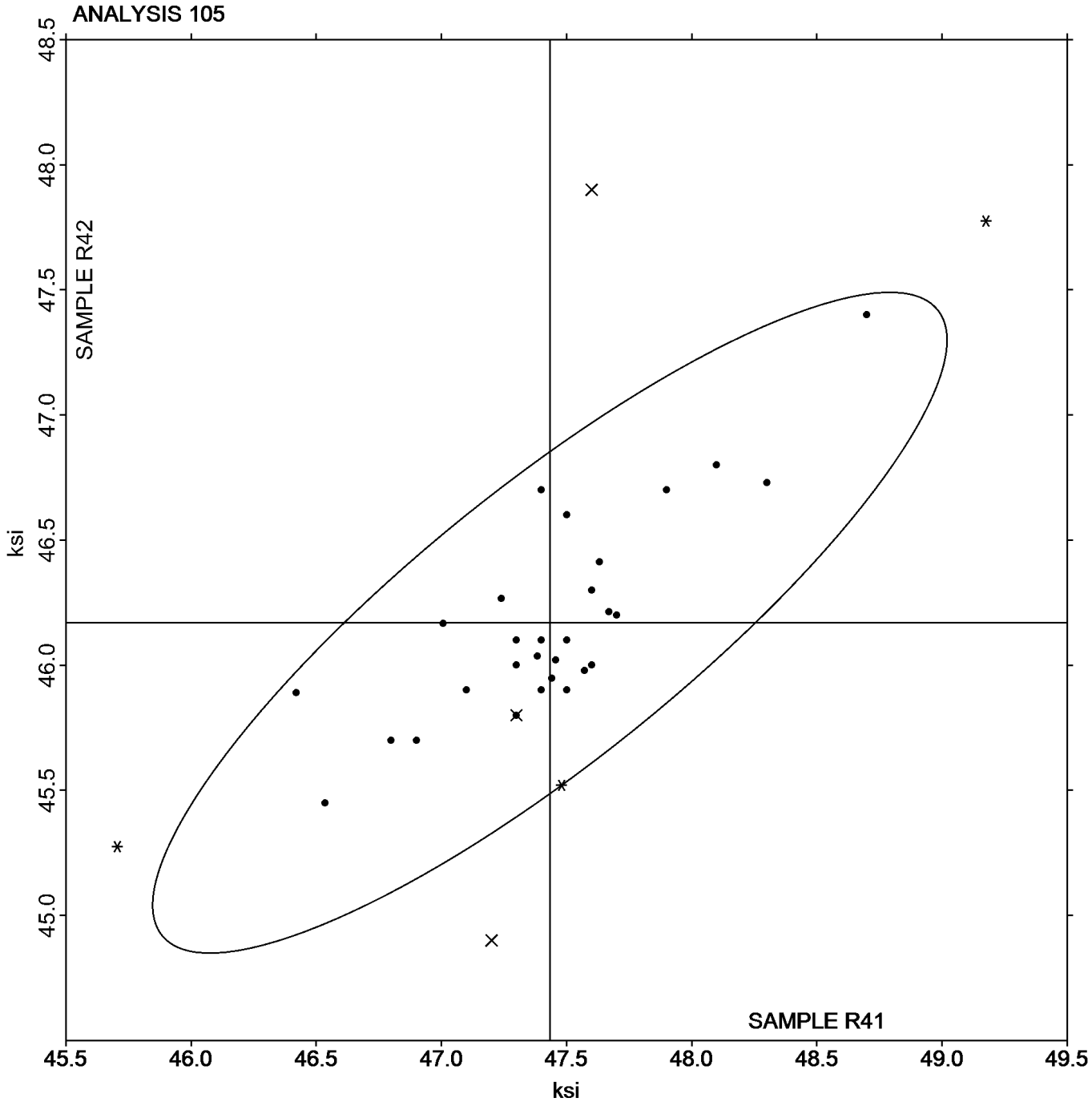
BM2YFZ (X) - Inconsistent in testing between samples.

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

R6LDMN (X) - Data were submitted late. Results were consistent with the other laboratories.

X633GX (X) - Data for Sample R41 are low.

SAMPLE R41	SAMPLE R42
47.43 ksi	46.17 ksi



		Sample R41			Sample R42		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
3TRLPM		41.20	0.10	0.19	38.90	-0.05	-0.06
4H7CMT		41.00	-0.10	-0.20	39.35	0.40	0.49
6FYFGV	*	41.80	0.70	1.36	41.20	2.25	2.75
6GMG7W		41.80	0.70	1.36	39.68	0.73	0.89
7X8PJK		41.31	0.20	0.40	39.07	0.13	0.16
924TRJ		41.60	0.50	0.97	39.40	0.45	0.55
926QY9		40.60	-0.50	-0.98	38.40	-0.55	-0.67
98AWPR		41.20	0.10	0.19	39.20	0.25	0.31
9R2Q98	X	38.46	-2.65	-5.16	37.96	-0.99	-1.21
BDRRFQ		40.73	-0.38	-0.73	37.24	-1.71	-2.08
BM2YFZ		41.00	-0.10	-0.20	38.00	-0.95	-1.15
DEUGK8		41.51	0.41	0.79	39.28	0.33	0.40
DXBBLU		41.40	0.30	0.58	39.40	0.45	0.55
EKGQ8A		41.60	0.50	0.97	39.20	0.25	0.31
FBMAAD	*	39.70	-1.40	-2.73	36.57	-2.38	-2.90
FYVB8U		40.40	-0.70	-1.37	39.00	0.05	0.07
GFVH38		41.20	0.10	0.19	39.10	0.15	0.19
KYGFQ4		41.70	0.60	1.16	39.40	0.45	0.55
LAXRV9		41.28	0.18	0.34	37.95	-1.00	-1.21
P7Z6JZ		41.30	0.20	0.38	39.20	0.25	0.31
P8UYEJ		40.80	-0.30	-0.59	37.70	-1.25	-1.52
PAKWTG		41.60	0.50	0.97	39.90	0.95	1.16
PU8NPR		41.44	0.33	0.65	39.07	0.13	0.16
QNHZJ9		39.97	-1.14	-2.22	38.08	-0.86	-1.05
QUKKTC		41.52	0.41	0.80	39.28	0.33	0.40
R6LDMN	X	41.20	0.10	0.19	38.80	-0.15	-0.18
RG9WTD		40.70	-0.40	-0.79	39.10	0.15	0.19
RVVYGW		41.20	0.10	0.19	39.10	0.15	0.19
RZN7UE		41.10	0.00	-0.01	38.90	-0.05	-0.06
TWKPZG		40.90	-0.20	-0.40	38.00	-0.95	-1.15
UWJW39	*	40.00	-1.10	-2.15	39.00	0.05	0.07
VXC6PH		41.25	0.15	0.28	38.90	-0.05	-0.06
WNZQZL		40.80	-0.30	-0.59	40.00	1.05	1.29
X633GX	X	33.27	-7.83	-15.27	39.84	0.90	1.09
X7BC9U		40.90	-0.20	-0.39	38.58	-0.37	-0.45
YH6HQC		41.20	0.10	0.19	38.90	-0.05	-0.06
YQ32CF		40.96	-0.14	-0.28	39.12	0.17	0.21
ZT4QTF		41.20	0.10	0.19	39.40	0.45	0.55
ZXC2X3		41.87	0.77	1.49	39.47	0.52	0.64

Summary Statistics

	Sample R41		Sample R42	
Grand Means	41.10	ksi	38.95	ksi
Stnd Dev Btwn Labs	0.51	ksi	0.82	ksi

Samples R41, R42 : 16G 6061-T6 (A), 14G 6061-T6 (B)

Statistics based on 36 of 39 reporting participants

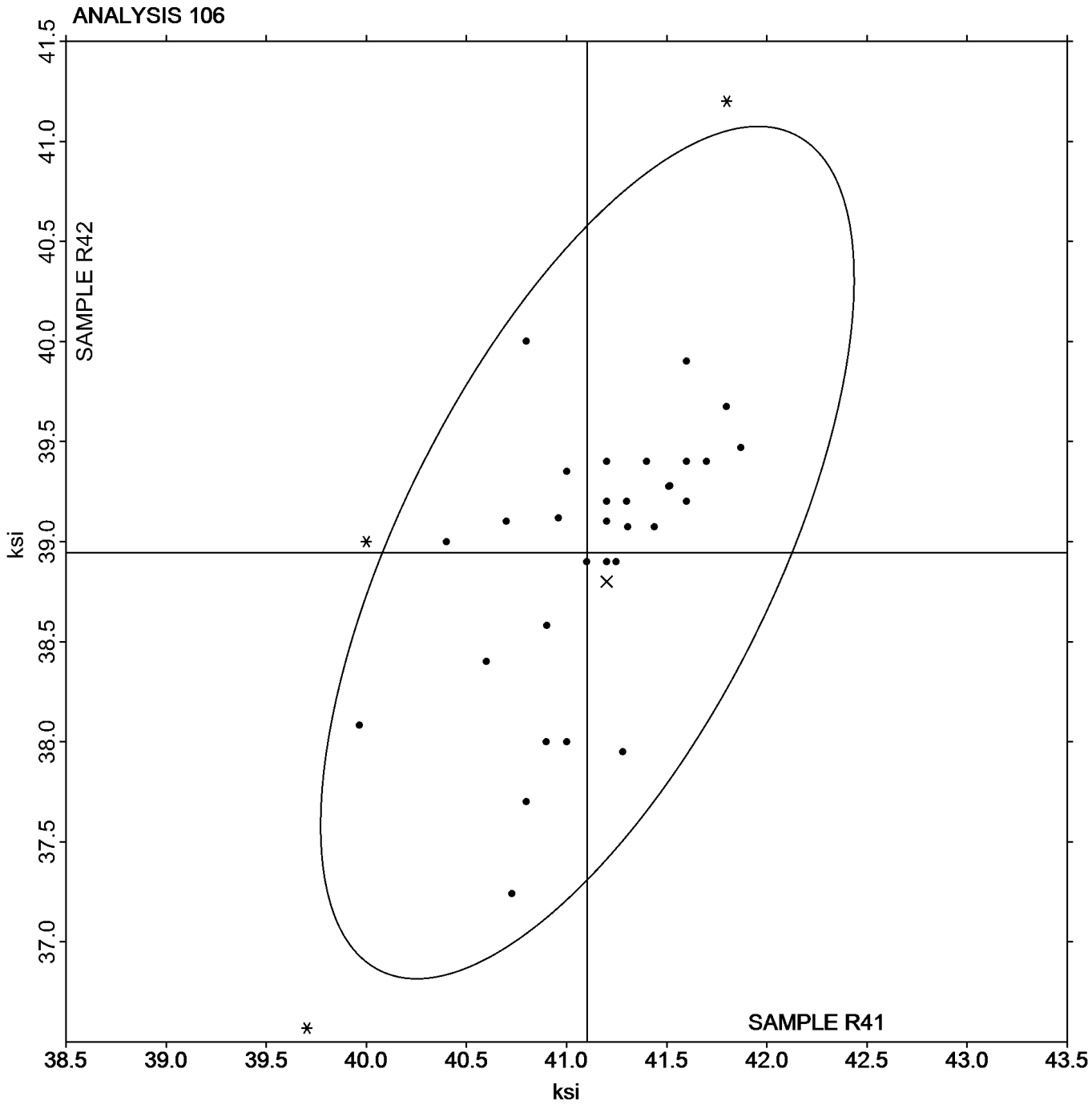
Comments on Assigned Data Flags for Test #106

9R2Q98 (X) - Data for sample R41 are low.

R6LDMN (X) - Data were submitted late. Results were consistent with the other laboratories.

X633GX (X) - Data for sample R41 are low.

SAMPLE R41	SAMPLE R42
41.10 ksi	38.95 ksi



Fasteners and Metals Interlaboratory Testing Program

Analysis 107

Elongation: Lab-Machined Flat Aluminum
ASTM B557

		Sample R41			Sample R42		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
3TRLPM		12.80	-0.38	-0.38	13.60	-0.28	-0.31
4H7CMT		14.40	1.22	1.22	14.80	0.92	1.01
6FYFGV		12.30	-0.88	-0.87	13.20	-0.68	-0.75
6GMG7W		14.80	1.62	1.62	15.60	1.72	1.89
7X8PJK	X	10.70	-2.48	-2.47	14.80	0.92	1.01
924TRJ		11.70	-1.48	-1.47	12.40	-1.48	-1.63
926QY9		13.00	-0.18	-0.18	13.40	-0.48	-0.53
98AWPR		14.70	1.52	1.52	14.50	0.62	0.68
9R2Q98		14.00	0.82	0.82	14.30	0.42	0.46
BDRRFQ	*	14.50	1.32	1.32	16.00	2.12	2.33
BM2YFZ		13.00	-0.18	-0.18	14.00	0.12	0.13
DEUGK8		12.10	-1.08	-1.07	12.80	-1.08	-1.19
DXBBLU		12.00	-1.18	-1.17	13.00	-0.88	-0.97
EKGQ8A		12.80	-0.38	-0.38	13.50	-0.38	-0.42
FBMAAD		12.80	-0.38	-0.38	13.62	-0.26	-0.29
FYVB8U		13.00	-0.18	-0.18	13.50	-0.38	-0.42
GFVH38		12.90	-0.28	-0.28	13.70	-0.18	-0.20
KYGFQ4		12.90	-0.28	-0.28	13.80	-0.08	-0.09
LAXRV9		12.10	-1.08	-1.07	13.20	-0.68	-0.75
P7Z6JZ		12.90	-0.28	-0.28	13.60	-0.28	-0.31
P8UYEJ		12.50	-0.68	-0.68	14.00	0.12	0.13
PAKWTG		14.00	0.82	0.82	14.00	0.12	0.13
PU8NPR		12.68	-0.50	-0.50	13.88	0.00	0.00
QNHZJ9		14.00	0.82	0.82	15.00	1.12	1.23
QUKKTC		14.00	0.82	0.82	14.50	0.62	0.68
R6LDMN	X	13.00	-0.18	-0.18	14.00	0.12	0.13
RG9WTD		11.20	-1.98	-1.97	12.50	-1.38	-1.52
RVVYGW		12.90	-0.28	-0.28	13.60	-0.28	-0.31
RZN7UE		14.10	0.92	0.92	14.50	0.62	0.68
TWKPZG		13.50	0.32	0.32	13.50	-0.38	-0.42
UWJW39	X	12.90	-0.28	-0.28	15.90	2.02	2.22
VXC6PH		14.70	1.52	1.52	15.10	1.22	1.34
WNZQZL		14.00	0.82	0.82	14.50	0.62	0.68
X633GX	X	17.20	4.02	4.01	16.25	2.37	2.60
X7BC9U	*	14.50	1.32	1.32	13.60	-0.28	-0.31
YH6HQC		11.80	-1.38	-1.37	13.80	-0.08	-0.09
YQ32CF		14.10	0.92	0.92	15.60	1.72	1.89
ZT4QTF		13.00	-0.18	-0.18	13.50	-0.38	-0.42
ZXC2X3		11.53	-1.65	-1.64	11.83	-2.05	-2.26

Summary Statistics

	Sample R41		Sample R42	
Grand Means	13.18	Percent	13.88	Percent
Stnd Dev Btwn Labs	1.00	Percent	0.91	Percent

Samples R41, R42 : 16G 6061-T6 (A), 14G 6061-T6 (B)

Statistics based on 35 of 39 reporting participants

Comments on Assigned Data Flags for Test #107

7X8PJK (X) - Inconsistent in testing between samples.

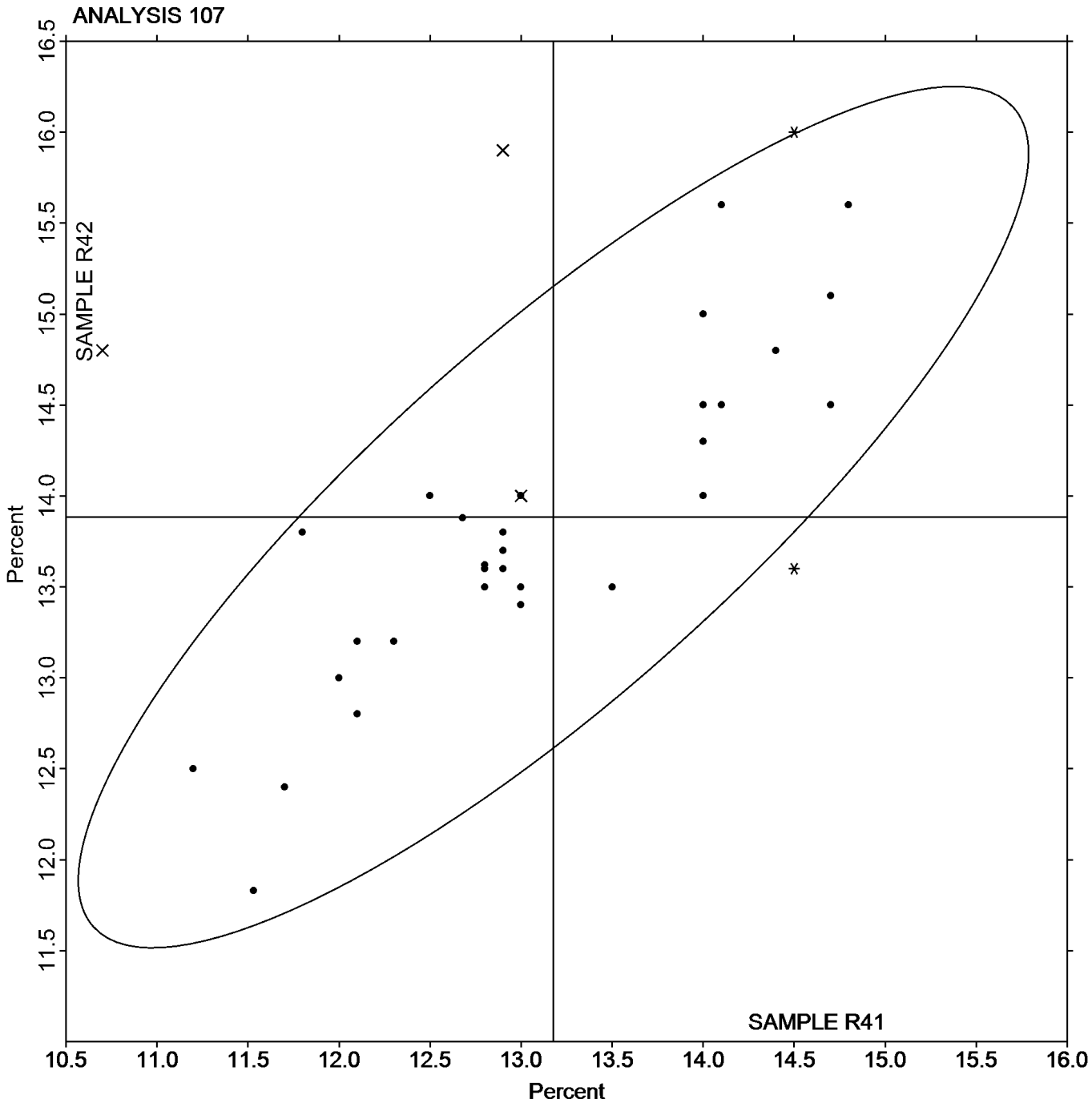
R6LDMN (X) - Data were submitted late. Results were consistent with the other laboratories.

UWJW39 (X) - Inconsistent in testing between samples.

X633GX (X) - Data for sample R41 are high.

SAMPLE R41
13.18 Percent

SAMPLE R42
13.88 Percent



		Sample A41			Sample A42		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
28DWJ6		73.50	0.09	0.11	72.50	-0.27	-0.33
29MT23		73.80	0.39	0.51	73.27	0.49	0.59
3BCCNL		71.97	-1.44	-1.89	70.79	-1.98	-2.38
4KBMCM		72.80	-0.61	-0.80	72.40	-0.37	-0.45
4WQNMM		75.28	1.86	2.43	74.72	1.95	2.34
4XHMZZ		72.33	-1.08	-1.41	71.76	-1.01	-1.22
926QY9		73.30	-0.11	-0.15	72.80	0.03	0.03
A6LEVQ		72.90	-0.51	-0.67	72.50	-0.27	-0.33
AHM97Y		72.37	-1.05	-1.37	71.99	-0.79	-0.95
ANU8QK		74.39	0.97	1.27	74.18	1.41	1.69
B2G9TP		73.20	-0.21	-0.28	72.40	-0.37	-0.45
B9D4T9		73.10	-0.31	-0.41	72.66	-0.11	-0.13
BEHV37		73.50	0.09	0.11	73.00	0.23	0.27
BPJVMK		73.90	0.49	0.64	73.40	0.63	0.75
CG728H	X	77.31	3.89	5.09	76.87	4.10	4.92
CRTNCX		73.60	0.19	0.24	72.80	0.03	0.03
DVGWQN		73.97	0.56	0.73	72.98	0.21	0.25
EQ9N6E		74.30	0.89	1.16	73.90	1.13	1.35
FYV2LP		72.80	-0.61	-0.80	72.30	-0.47	-0.57
J4WGKN		73.90	0.49	0.64	73.40	0.63	0.75
JJ8FVA		74.55	1.14	1.49	74.55	1.78	2.13
JK8ZGU		74.20	0.79	1.03	72.80	0.03	0.03
KML6GB		72.23	-1.18	-1.55	71.21	-1.56	-1.87
L2GGH8		73.17	-0.24	-0.32	72.29	-0.48	-0.58
LJYXKL		73.70	0.29	0.37	73.20	0.43	0.51
MMWFZ8		73.03	-0.38	-0.50	72.60	-0.18	-0.21
N3LDNZ		72.90	-0.51	-0.67	72.40	-0.37	-0.45
N6VVXC		72.70	-0.71	-0.93	72.50	-0.27	-0.33
NWH9Y3		73.82	0.41	0.54	73.24	0.47	0.56
PEFTBG		72.87	-0.55	-0.71	72.40	-0.38	-0.45
PJ74MZ		74.11	0.70	0.91	72.83	0.06	0.07
T2B6M3		73.53	0.12	0.16	72.66	-0.11	-0.13
TG8CRV	*	73.00	-0.41	-0.54	71.50	-1.27	-1.53
TQGLBH		74.57	1.16	1.51	73.69	0.92	1.10
U2TDDH		73.20	-0.21	-0.28	73.19	0.41	0.49
ULJFFD		73.50	0.09	0.11	72.70	-0.07	-0.09
V33T7A		73.16	-0.25	-0.33	72.79	0.02	0.02
WAHVQG		72.08	-1.33	-1.74	71.24	-1.53	-1.84
WJ9CH7		73.10	-0.31	-0.41	72.70	-0.07	-0.09
XRDQVR		72.60	-0.81	-1.06	72.00	-0.77	-0.93
XX388H		74.00	0.59	0.77	73.40	0.63	0.75
Y9ZB87		73.43	0.02	0.02	72.90	0.13	0.15
ZV897P		74.99	1.57	2.05	73.97	1.20	1.43

Summary Statistics

	Sample A41		Sample A42	
Grand Means	73.41	ksi	72.77	ksi
Stnd Dev Btwn Labs	0.77	ksi	0.83	ksi

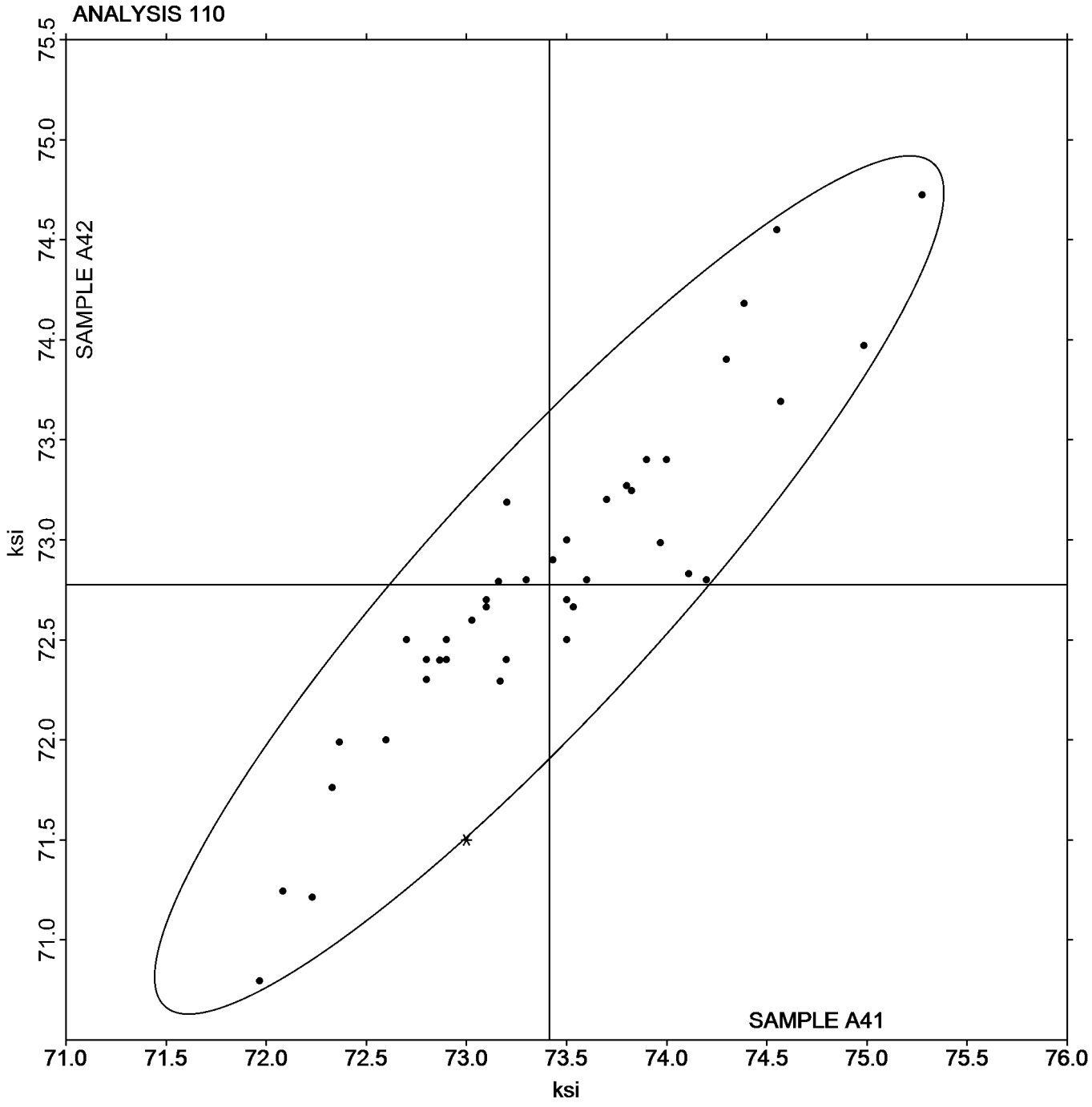
Samples A41, A42 : AISI 1018 (S), AISI 1018 (L)

Statistics based on 42 of 43 reporting participants

Comments on Assigned Data Flags for Test #110

CG728H (X) - Data for both samples are high. Possible Systematic Error.

SAMPLE A41	SAMPLE A42
73.41 ksi	72.77 ksi



		Sample A41			Sample A42		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
28DWJ6		54.60	4.66	1.48	54.20	3.81	1.06
29MT23	*	49.90	-0.04	-0.01	44.91	-5.48	-1.52
3BCCNL		45.30	-4.64	-1.47	45.96	-4.42	-1.23
4KBMCM		55.70	5.76	1.83	54.80	4.41	1.22
4WQNMM		49.79	-0.15	-0.05	52.37	1.99	0.55
4XHMZZ		52.24	2.30	0.73	54.38	3.99	1.11
926QY9		46.40	-3.54	-1.12	45.80	-4.59	-1.27
A6LEVQ		46.10	-3.84	-1.22	45.60	-4.79	-1.33
AHM97Y		47.19	-2.75	-0.87	50.23	-0.15	-0.04
ANU8QK		49.93	-0.01	0.00	48.58	-1.80	-0.50
B2G9TP		49.00	-0.94	-0.30	48.00	-2.39	-0.66
B9D4T9		56.71	6.77	2.15	57.29	6.90	1.91
BEHV37		49.70	-0.24	-0.08	51.00	0.61	0.17
BPJVMK		47.30	-2.64	-0.84	47.00	-3.39	-0.94
CG728H		49.89	-0.05	-0.01	50.04	-0.35	-0.10
CRTNCX		56.00	6.06	1.92	56.10	5.71	1.58
DVGWQN		54.24	4.31	1.37	54.35	3.96	1.10
EQ9N6E		48.60	-1.34	-0.43	51.40	1.01	0.28
FYV2LP		46.30	-3.64	-1.16	46.00	-4.39	-1.22
J4WGKN		50.70	0.76	0.24	56.00	5.61	1.56
JJ8FVA		53.66	3.73	1.18	52.94	2.55	0.71
JK8ZGU		50.73	0.79	0.25	50.01	-0.38	-0.11
KML6GB		52.50	2.56	0.81	51.20	0.81	0.23
L2GGH8		56.28	6.34	2.01	54.79	4.41	1.22
LJYXKL		49.20	-0.74	-0.23	53.60	3.21	0.89
MMWFZ8		47.64	-2.30	-0.73	46.72	-3.67	-1.02
N3LDNZ		50.20	0.26	0.08	52.30	1.91	0.53
N6VVXC		51.50	1.56	0.50	47.50	-2.89	-0.80
NWH9Y3		48.73	-1.21	-0.38	48.01	-2.38	-0.66
PEFTBG		48.60	-1.34	-0.43	49.21	-1.18	-0.33
PJ74MZ		47.86	-2.08	-0.66	48.13	-2.26	-0.63
T2B6M3		47.57	-2.37	-0.75	50.62	0.23	0.06
TG8CRV		48.90	-1.04	-0.33	48.90	-1.49	-0.41
TQGLBH		50.40	0.46	0.15	50.53	0.14	0.04
U2TDDH		47.86	-2.08	-0.66	49.02	-1.36	-0.38
ULJFFD		50.00	0.06	0.02	53.20	2.81	0.78
V33T7A		45.64	-4.30	-1.37	44.76	-5.63	-1.56
WAHVQG		45.69	-4.25	-1.35	45.54	-4.84	-1.34
WJ9CH7		55.40	5.46	1.73	57.50	7.11	1.97
XRDQVR		46.90	-3.04	-0.97	47.60	-2.79	-0.77
XX388H		47.10	-2.84	-0.90	47.10	-3.29	-0.91
Y9ZB87		48.52	-1.42	-0.45	48.87	-1.51	-0.42
ZV897P		50.91	0.97	0.31	54.53	4.15	1.15

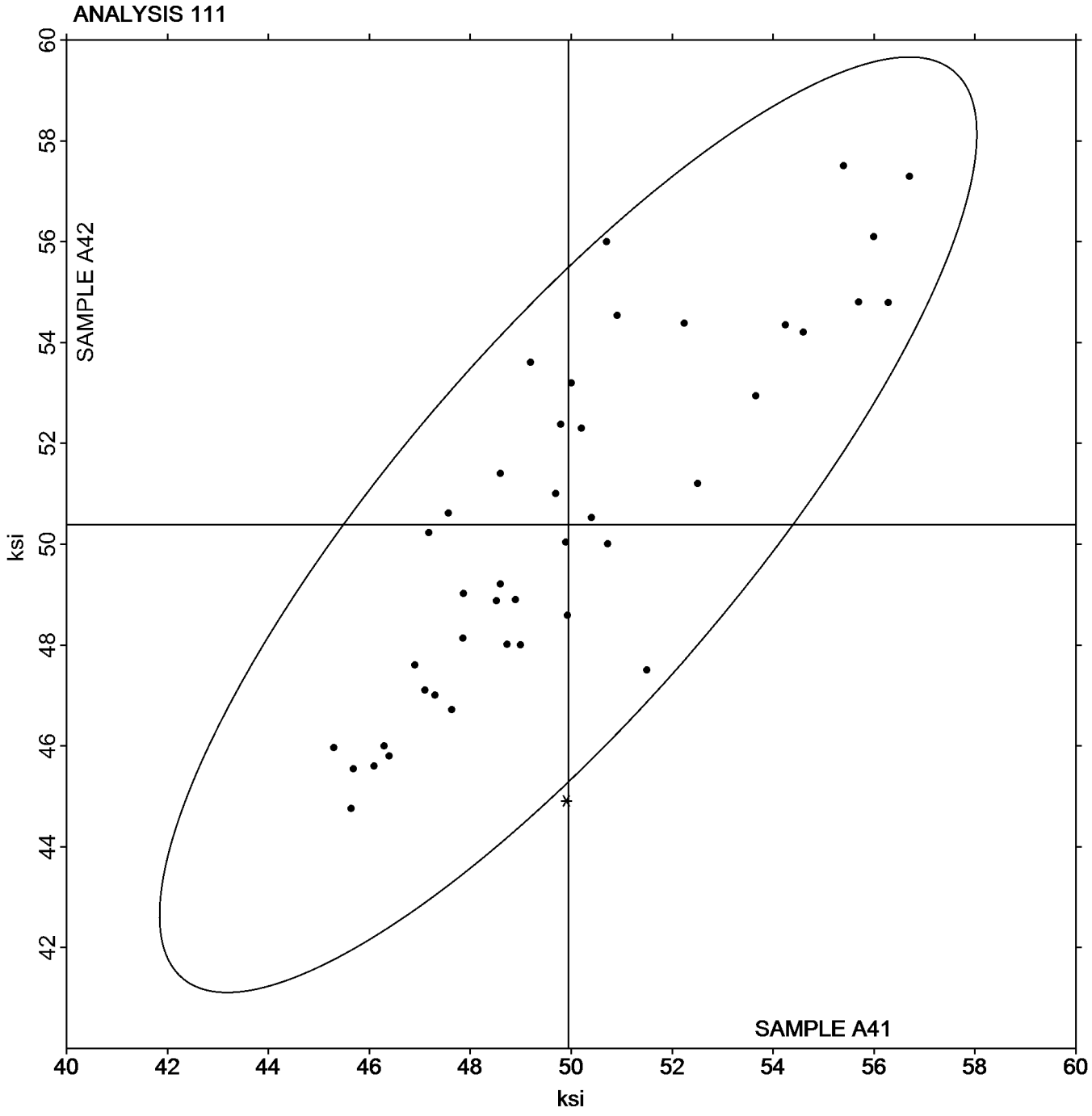
Summary Statistics

	Sample A41		Sample A42	
Grand Means	49.94	ksi	50.39	ksi
Stnd Dev Btwn Labs	3.15	ksi	3.61	ksi

Samples A41, A42 : AISI 1018 (S), AISI 1018 (L)

Statistics based on 43 of 43 reporting participants

SAMPLE A41	SAMPLE A42
49.94 ksi	50.39 ksi



		Sample A41			Sample A42		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
28DWJ6		33.00	0.21	0.21	33.00	0.33	0.42
29MT23		32.25	-0.54	-0.55	31.68	-0.99	-1.26
3BCCNL		31.96	-0.83	-0.84	32.92	0.25	0.31
4KBMCM		32.80	0.01	0.01	33.40	0.73	0.92
4WQNMM		30.80	-1.99	-2.02	31.20	-1.47	-1.87
4XHMZZ		33.50	0.71	0.72	32.50	-0.17	-0.22
926QY9	*	34.00	1.21	1.23	31.50	-1.17	-1.49
A6LEVQ		32.60	-0.19	-0.19	33.00	0.33	0.42
AHM97Y	*	35.32	2.53	2.57	34.07	1.40	1.78
ANU8QK		33.66	0.87	0.89	33.14	0.47	0.59
B2G9TP		33.00	0.21	0.21	32.00	-0.67	-0.85
B9D4T9		34.00	1.21	1.23	33.80	1.13	1.43
BEHV37		34.00	1.21	1.23	32.00	-0.67	-0.85
BPJVMK		32.20	-0.59	-0.60	33.90	1.23	1.56
CG728H		33.00	0.21	0.21	33.00	0.33	0.42
CRTNCX		32.40	-0.39	-0.39	33.20	0.53	0.67
DVGWQN		32.20	-0.59	-0.60	32.30	-0.37	-0.47
EQ9N6E		31.90	-0.89	-0.90	31.30	-1.37	-1.74
FYV2LP		32.90	0.11	0.11	32.00	-0.67	-0.85
J4WGKN		32.00	-0.79	-0.80	32.00	-0.67	-0.85
JJ8FVA		33.32	0.53	0.54	34.50	1.83	2.32
JK8ZGU		31.80	-0.99	-1.00	32.60	-0.07	-0.09
KML6GB		32.00	-0.79	-0.80	32.10	-0.57	-0.73
L2GGH8		33.74	0.95	0.97	33.15	0.48	0.61
LJYXKL		31.20	-1.59	-1.61	31.90	-0.77	-0.98
MMWFZ8		32.09	-0.70	-0.71	32.11	-0.56	-0.71
N3LDNZ		33.80	1.01	1.03	33.60	0.93	1.18
N6VVXC		33.70	0.91	0.93	33.50	0.83	1.05
NWH9Y3		32.20	-0.59	-0.60	32.20	-0.47	-0.60
PEFTBG		33.50	0.71	0.72	33.20	0.53	0.67
PJ74MZ		33.00	0.21	0.21	33.00	0.33	0.42
T2B6M3		32.20	-0.59	-0.60	32.80	0.13	0.16
TG8CRV		33.00	0.21	0.21	33.00	0.33	0.42
TQGLBH		31.53	-1.26	-1.28	31.90	-0.77	-0.98
U2TDDH		31.50	-1.29	-1.31	31.50	-1.17	-1.49
ULJFFD		33.00	0.21	0.21	32.00	-0.67	-0.85
V33T7A	X	46.50	13.71	13.93	34.50	1.83	2.32
WAHVQG		31.86	-0.93	-0.94	32.58	-0.09	-0.12
WJ9CH7		34.80	2.01	2.04	33.30	0.63	0.80
XRDQVR		32.30	-0.49	-0.50	32.40	-0.27	-0.35
XX388H		34.30	1.51	1.54	33.60	0.93	1.18
Y9ZB87		32.00	-0.79	-0.80	32.60	-0.07	-0.09
ZV897P		32.80	0.01	0.01	32.80	0.13	0.16

Summary Statistics

	Sample A41		Sample A42	
Grand Means	32.79	Percent	32.67	Percent
Stnd Dev Btwn Labs	0.98	Percent	0.79	Percent

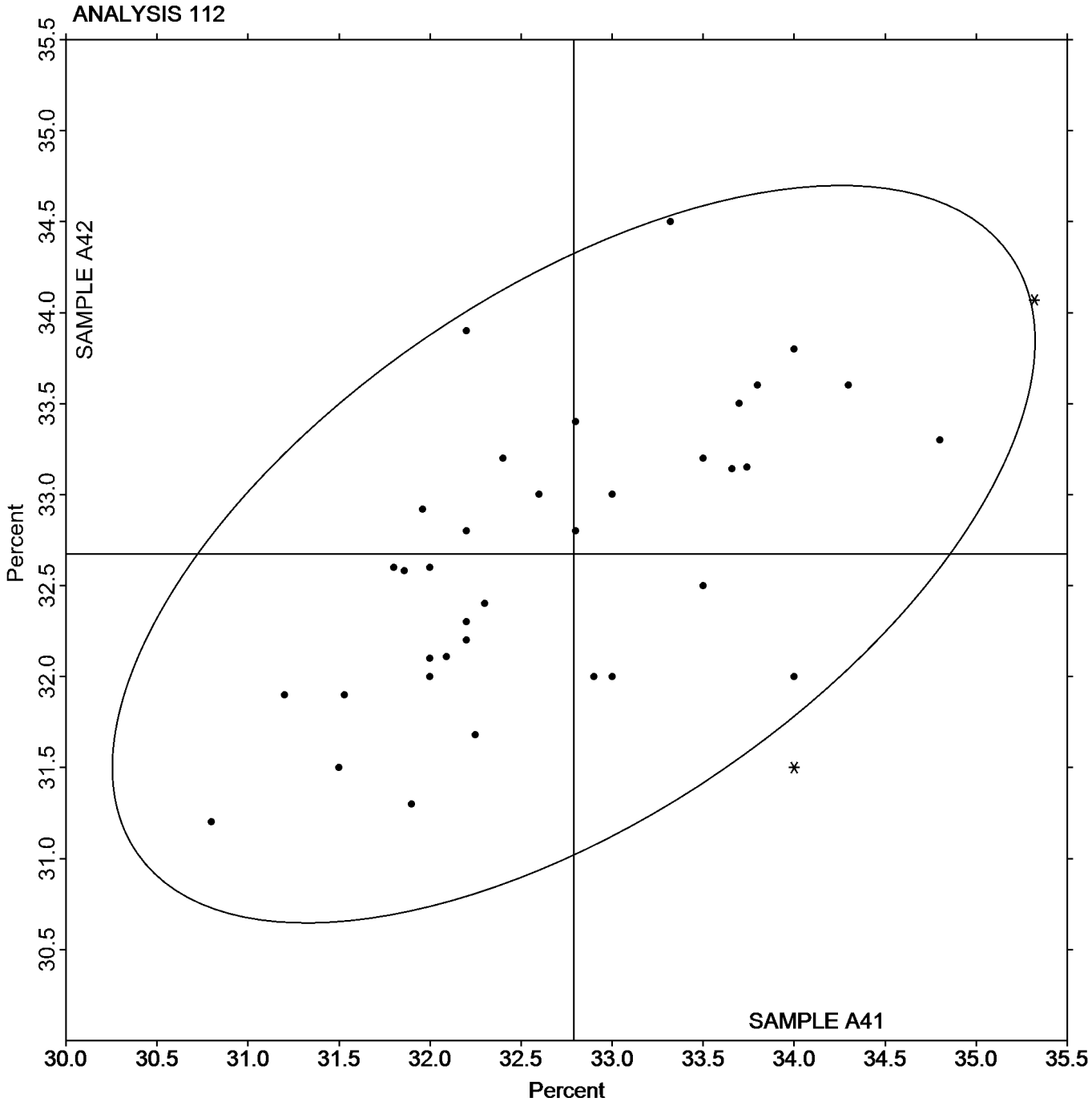
Samples A41, A42 : AISI 1018 (S), AISI 1018 (L)

Statistics based on 42 of 43 reporting participants

Comments on Assigned Data Flags for Test #112

V33T7A (X) - Data for sample A41 are high.

SAMPLE A41	SAMPLE A42
32.79 Percent	32.67 Percent



		Sample A41			Sample A42		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
28DWJ6		64.80	-0.48	-0.62	66.30	0.75	0.97
29MT23		66.16	0.88	1.14	65.83	0.28	0.36
3BCCNL		66.00	0.72	0.93	66.28	0.73	0.94
4KBMCM		66.20	0.92	1.19	66.20	0.65	0.84
4WQNMM		65.90	0.62	0.81	65.60	0.05	0.06
4XHMZZ		64.50	-0.78	-1.01	64.70	-0.85	-1.10
926QY9		65.00	-0.28	-0.36	65.10	-0.45	-0.58
A6LEVQ		64.60	-0.68	-0.88	65.50	-0.05	-0.07
AHM97Y		66.24	0.96	1.25	66.35	0.80	1.03
ANU8QK		65.58	0.30	0.39	65.96	0.41	0.53
B2G9TP		64.00	-1.28	-1.66	66.00	0.45	0.58
B9D4T9		64.70	-0.58	-0.75	64.60	-0.95	-1.23
BEHV37		66.00	0.72	0.93	65.00	-0.55	-0.71
BPJVMK		65.70	0.42	0.55	64.20	-1.35	-1.74
CG728H		64.00	-1.28	-1.66	64.00	-1.55	-2.00
CRTNCX		65.00	-0.28	-0.36	65.70	0.15	0.19
DVGWQN		65.00	-0.28	-0.36	65.20	-0.35	-0.45
EQ9N6E		65.50	0.22	0.29	65.20	-0.35	-0.45
FYV2LP	*	63.20	-2.08	-2.69	65.30	-0.25	-0.32
J4WGKN		64.00	-1.28	-1.66	65.00	-0.55	-0.71
JJ8FVA		64.91	-0.37	-0.48	64.68	-0.87	-1.12
JK8ZGU		65.20	-0.08	-0.10	65.20	-0.35	-0.45
KML6GB		65.70	0.42	0.55	66.30	0.75	0.97
L2GGH8		64.13	-1.15	-1.49	65.65	0.10	0.13
LJYXKL		64.40	-0.88	-1.14	65.60	0.05	0.06
MMWFZ8		64.90	-0.38	-0.49	65.75	0.20	0.26
N3LDNZ		66.10	0.82	1.06	67.20	1.65	2.13
N6VVXC		65.20	-0.08	-0.10	64.40	-1.15	-1.48
NWH9Y3		66.70	1.42	1.84	67.20	1.65	2.13
PEFTBG		65.64	0.37	0.47	65.88	0.33	0.42
PJ74MZ		65.00	-0.28	-0.36	66.00	0.45	0.58
T2B6M3		65.20	-0.08	-0.10	63.90	-1.65	-2.13
TG8CRV		65.00	-0.28	-0.36	67.00	1.45	1.87
TQGLBH		65.11	-0.17	-0.22	65.30	-0.25	-0.32
U2TDDH		65.30	0.02	0.03	65.00	-0.55	-0.71
ULJFFD		65.70	0.42	0.55	65.30	-0.25	-0.32
V33T7A		65.70	0.42	0.55	65.40	-0.15	-0.19
WAHVQG		66.20	0.92	1.19	66.11	0.56	0.72
WJ9CH7		65.00	-0.28	-0.36	65.90	0.35	0.45
XRDQVR		66.20	0.92	1.19	66.50	0.95	1.22
XX388H		66.60	1.32	1.71	65.80	0.25	0.32
Y9ZB87		65.70	0.42	0.55	65.70	0.15	0.19
ZV897P		65.30	0.02	0.03	64.90	-0.65	-0.84

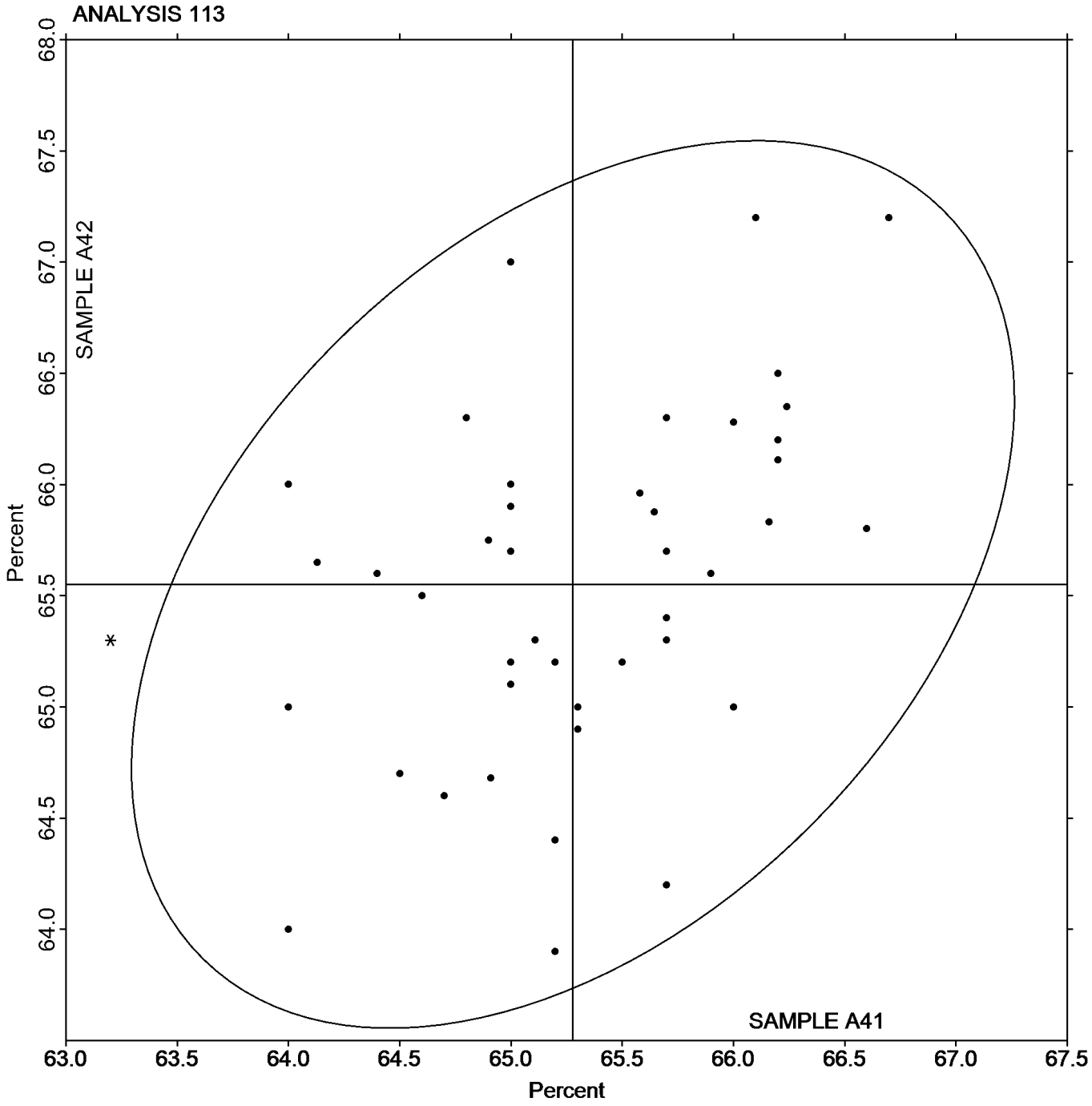
Summary Statistics

	Sample A41		Sample A42	
Grand Means	65.28	Percent	65.55	Percent
Stnd Dev Btwn Labs	0.77	Percent	0.78	Percent

Samples A41, A42 : AISI 1018 (S), AISI 1018 (L)

Statistics based on 43 of 43 reporting participants

SAMPLE A41	SAMPLE A42
65.28 Percent	65.55 Percent



		Sample N41			Sample N42		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
2EW4X4		89.66	0.43	0.49	94.18	0.25	0.46
3DEFC3		89.38	0.15	0.17	93.84	-0.09	-0.17
4KBMCM		89.30	0.07	0.08	94.02	0.09	0.16
6FGZBL		89.12	-0.11	-0.13	93.56	-0.37	-0.68
6T9JVJ		90.68	1.45	1.64	94.96	1.03	1.88
7DKZAT		89.64	0.41	0.46	93.76	-0.17	-0.31
87MJMU		88.08	-1.15	-1.30	92.88	-1.05	-1.92
8Y2Q7N		89.20	-0.03	-0.04	94.70	0.77	1.41
8ZKD67		88.14	-1.09	-1.23	93.24	-0.69	-1.26
926QY9		89.78	0.55	0.62	93.20	-0.73	-1.33
9C4LUH		88.26	-0.97	-1.10	92.86	-1.07	-1.96
9X4PWQ		90.66	1.43	1.62	94.96	1.03	1.88
A7VHNG		88.70	-0.53	-0.60	93.32	-0.61	-1.12
ACNFJY		88.20	-1.03	-1.17	93.58	-0.35	-0.64
BEHV37		89.36	0.13	0.15	93.72	-0.21	-0.38
BHARXR		88.22	-1.01	-1.14	93.88	-0.05	-0.09
BHMJJG		89.16	-0.07	-0.08	94.24	0.31	0.57
BNVR6R		89.06	-0.17	-0.19	93.74	-0.19	-0.35
CG728H	*	89.46	0.23	0.26	92.86	-1.07	-1.96
CRTNCX		88.04	-1.19	-1.35	93.38	-0.55	-1.01
CTWM2X		90.02	0.79	0.89	94.56	0.63	1.15
CVNJTC		91.02	1.79	2.02	94.28	0.35	0.64
CY9B2U		89.68	0.45	0.51	94.16	0.23	0.42
CZ2WHK		90.66	1.43	1.62	94.46	0.53	0.97
EDHY79		90.00	0.77	0.87	94.62	0.69	1.26
FBMAAD		91.10	1.87	2.12	94.52	0.59	1.08
FF38QT		89.90	0.67	0.76	94.52	0.59	1.08
GVD4R8		88.52	-0.71	-0.80	93.88	-0.05	-0.09
GX3HCB		89.43	0.20	0.22	94.07	0.14	0.26
H4ZMMR		88.42	-0.81	-0.92	93.56	-0.37	-0.68
HEH2PU		88.88	-0.35	-0.40	94.14	0.21	0.38
HGNLDU		88.66	-0.57	-0.65	93.76	-0.17	-0.31
HTVBWB		90.44	1.21	1.37	94.40	0.47	0.86
JHF6UL		87.44	-1.79	-2.03	93.24	-0.69	-1.26
L3XZDJ		89.78	0.55	0.62	94.26	0.33	0.60
LAERMG		88.50	-0.73	-0.83	93.70	-0.23	-0.42
MMWFZ8		88.80	-0.43	-0.49	93.90	-0.03	-0.06
MRANGW		89.98	0.75	0.85	94.04	0.11	0.20
MVTCJH		88.70	-0.53	-0.60	94.10	0.17	0.31
P8WMGV	*	89.38	0.15	0.17	95.12	1.19	2.17
PEXZGX		90.00	0.77	0.87	94.70	0.77	1.41
PHD6FT		90.60	1.37	1.55	94.80	0.87	1.59
PJ89QF		88.44	-0.79	-0.90	93.78	-0.15	-0.27
PWD9DT		89.82	0.59	0.67	94.08	0.15	0.27
QBGQAL		87.90	-1.33	-1.51	92.82	-1.11	-2.03
RHRHRV		90.16	0.93	1.05	94.31	0.38	0.70
T2Y48V		89.76	0.53	0.60	93.32	-0.61	-1.12

WebCode	Data Flag	Sample N41 Lab Mean	Sample N41 Diff. from Grand Mean	Sample N41 CPV	Sample N42 Lab Mean	Sample N42 Diff. from Grand Mean	Sample N42 CPV
T4LZD2		89.14	-0.09	-0.10	94.42	0.49	0.89
TAQJUE		89.76	0.53	0.60	94.52	0.59	1.08
TD83GU		90.21	0.98	1.11	94.22	0.29	0.53
TEY76U		90.10	0.87	0.98	94.06	0.13	0.24
TQHCPD		88.36	-0.87	-0.99	93.61	-0.32	-0.59
TVBDRR	*	87.32	-1.91	-2.16	93.74	-0.19	-0.35
U2TDDH		88.94	-0.29	-0.33	93.00	-0.93	-1.70
UAKNND		89.84	0.61	0.69	94.09	0.16	0.30
UFWRG2		87.78	-1.45	-1.64	93.46	-0.47	-0.86
ULJFFD		88.44	-0.79	-0.90	93.56	-0.37	-0.68
V33T7A		88.76	-0.47	-0.53	94.44	0.51	0.93
VQQ82V		89.66	0.43	0.49	93.24	-0.69	-1.26
VQT68K		89.20	-0.03	-0.04	94.02	0.09	0.16
VXN3W9		89.20	-0.03	-0.04	93.94	0.01	0.02
WNZQZL		88.40	-0.83	-0.94	93.40	-0.53	-0.97
XH6978		87.64	-1.59	-1.80	93.54	-0.39	-0.71
Y9ZB87		89.52	0.29	0.33	94.00	0.07	0.13
Z78WZ8		89.47	0.24	0.27	94.32	0.39	0.71
ZH6VVK		89.42	0.19	0.21	93.84	-0.09	-0.17

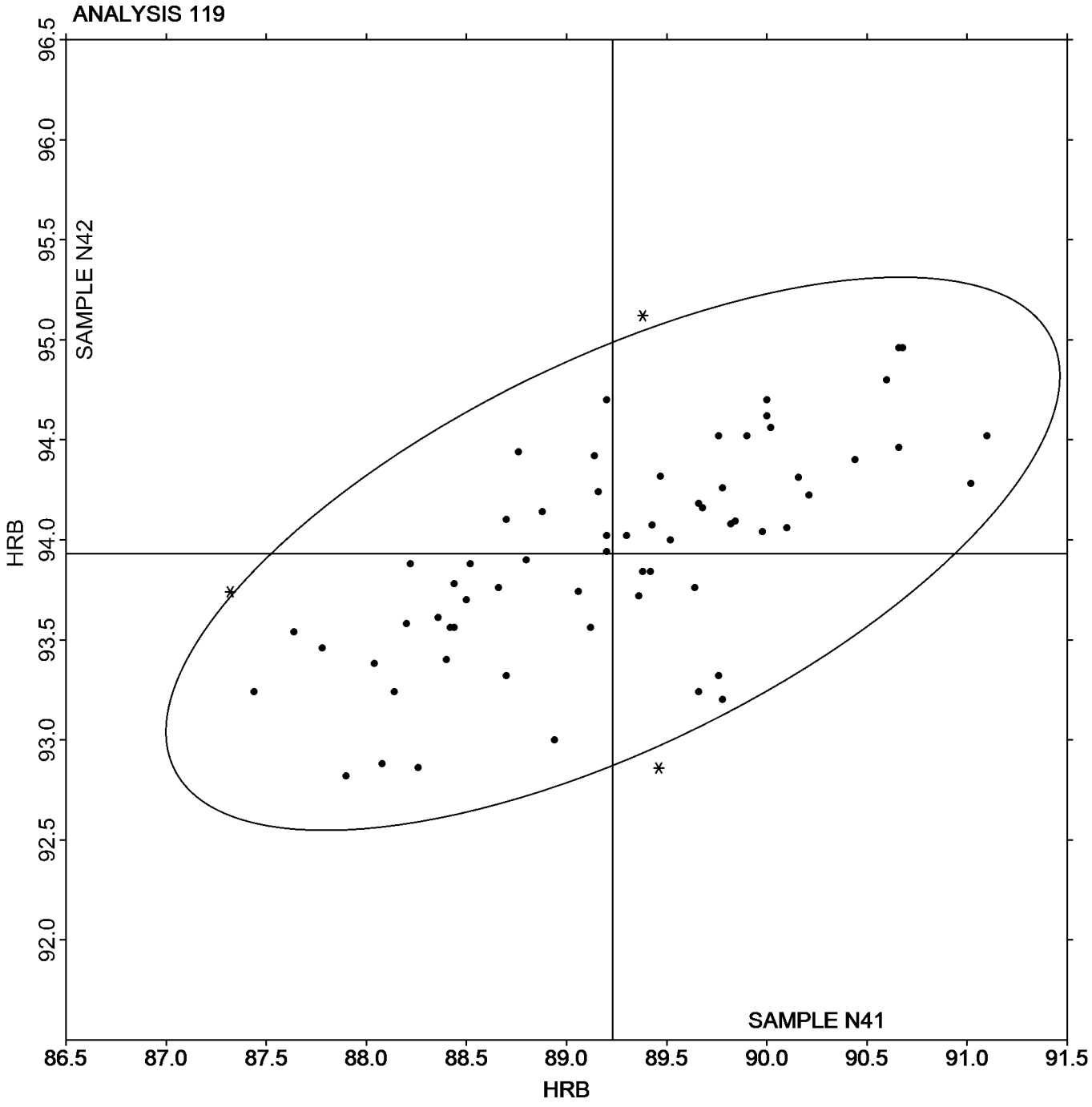
Summary Statistics

	Sample N41		Sample N42	
Grand Means	89.23	HRB	93.93	HRB
Stnd Dev Btwn Labs	0.88	HRB	0.55	HRB

Samples N41, N42 : Brass, Steel

Statistics based on 66 of 66 reporting participants

SAMPLE N41	SAMPLE N42
89.23 HRB	93.93 HRB



		Sample S41			Sample S42		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
2XTMVB		459.00	-2.55	-0.21	521.00	-9.22	-0.53
3PBCHB		459.72	-1.83	-0.15	525.52	-4.70	-0.27
3PVX9F		462.00	0.45	0.04	538.20	7.98	0.46
4XGM2K		481.60	20.05	1.65	566.00	35.78	2.07
6FGZBL		447.56	-13.99	-1.15	504.44	-25.78	-1.49
6FYFGV		448.20	-13.35	-1.10	515.80	-14.42	-0.84
6L334A		466.50	4.95	0.41	532.30	2.08	0.12
6PLVGX		464.20	2.65	0.22	540.20	9.98	0.58
6ZH86B		473.00	11.45	0.94	541.40	11.18	0.65
76W3NF	X	521.40	59.85	4.91	586.00	55.78	3.23
7CEE3F		450.20	-11.35	-0.93	512.40	-17.82	-1.03
7MEWLV		451.58	-9.97	-0.82	505.60	-24.62	-1.43
7TWGFV		470.40	8.85	0.73	535.00	4.78	0.28
87MJMU		440.80	-20.75	-1.70	513.60	-16.62	-0.96
8PFCGZ		456.40	-5.15	-0.42	517.40	-12.82	-0.74
924TRJ		457.80	-3.75	-0.31	511.20	-19.02	-1.10
926JZM		469.28	7.73	0.63	547.76	17.54	1.02
926QY9		466.80	5.25	0.43	516.60	-13.62	-0.79
9X4PWQ		473.20	11.65	0.96	537.60	7.38	0.43
A6LEVQ		452.00	-9.55	-0.78	517.10	-13.12	-0.76
AVGDKR		466.44	4.89	0.40	524.86	-5.36	-0.31
BDRRFQ		467.20	5.65	0.46	541.80	11.58	0.67
BEHV37		447.80	-13.75	-1.13	516.00	-14.22	-0.82
BM2YFZ		489.80	28.25	2.32	570.20	39.98	2.32
CCQTJJ		476.00	14.45	1.19	555.20	24.98	1.45
CJBU2G	X	475.72	14.18	1.16	591.06	60.84	3.52
CZ2WHK		476.40	14.85	1.22	537.80	7.58	0.44
DHVEZ7		470.20	8.65	0.71	549.80	19.58	1.13
DTWXGZ		462.20	0.65	0.05	515.00	-15.22	-0.88
DWXV4L		459.20	-2.35	-0.19	533.20	2.98	0.17
DXBBLU		469.00	7.45	0.61	532.40	2.18	0.13
EHCQKW		452.20	-9.35	-0.77	520.20	-10.02	-0.58
EZAMKL		470.60	9.05	0.74	523.40	-6.82	-0.40
F6ZKMH	*	484.80	23.25	1.91	579.40	49.18	2.85
FRDMTR		461.80	0.25	0.02	526.60	-3.62	-0.21
FZM8U3		441.60	-19.95	-1.64	500.60	-29.62	-1.72
GEKJ4R	X	456.20	-5.35	-0.44	456.20	-74.02	-4.29
GEL9BB	*	486.80	25.25	2.07	537.40	7.18	0.42
HBVTVY	X	504.20	42.65	3.50	579.14	48.92	2.83
J3JWN8		471.40	9.85	0.81	551.20	20.98	1.22
JG6A6M		469.60	8.05	0.66	533.00	2.78	0.16
JHF6UL		467.60	6.05	0.50	539.40	9.18	0.53
KAGYEP		450.20	-11.35	-0.93	514.40	-15.82	-0.92
KEA323	X	516.40	54.85	4.50	608.00	77.78	4.51
KUMAG8		456.00	-5.55	-0.46	529.40	-0.82	-0.05
KZCP8Z		442.60	-18.95	-1.55	504.20	-26.02	-1.51
L2GGH8	X	515.00	53.45	4.39	639.00	108.78	6.30

		Sample S41			Sample S42		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
LFHFGH		471.20	9.65	0.79	545.00	14.78	0.86
LJYXKL		446.00	-15.55	-1.28	513.60	-16.62	-0.96
LL762T		442.34	-19.21	-1.58	526.10	-4.12	-0.24
LU2834		455.20	-6.35	-0.52	523.40	-6.82	-0.40
M7M2PG		456.20	-5.35	-0.44	539.00	8.78	0.51
MNB843		457.80	-3.75	-0.31	519.60	-10.62	-0.62
MRANGW		461.00	-0.55	-0.04	552.20	21.98	1.27
MYCTB2		440.72	-20.83	-1.71	496.94	-33.28	-1.93
N3LDNZ		457.40	-4.15	-0.34	531.80	1.58	0.09
N6VVXC		456.94	-4.61	-0.38	542.12	11.90	0.69
NNP2FW		449.82	-11.73	-0.96	518.48	-11.74	-0.68
P66RUL		453.40	-8.15	-0.67	513.40	-16.82	-0.97
PHUL7F		452.40	-9.15	-0.75	521.40	-8.82	-0.51
PKH3H9		455.60	-5.95	-0.49	526.40	-3.82	-0.22
QKYEXT		462.60	1.05	0.09	536.60	6.38	0.37
QQMC92		466.00	4.45	0.37	532.80	2.58	0.15
RHRHRV		472.00	10.45	0.86	521.20	-9.02	-0.52
RUYLTJ		437.98	-23.57	-1.93	514.74	-15.48	-0.90
TCYUT4		462.60	1.05	0.09	542.00	11.78	0.68
TWKPZG	*	471.20	9.65	0.79	574.40	44.18	2.56
U2CN4X		449.40	-12.15	-1.00	531.00	0.78	0.05
U2TDDH		445.78	-15.77	-1.29	525.82	-4.40	-0.25
U6V6TB	*	493.20	31.65	2.60	554.00	23.78	1.38
UA8NF6		480.80	19.25	1.58	554.80	24.58	1.42
UFFDDX		466.94	5.39	0.44	515.58	-14.64	-0.85
UH287R		475.60	14.05	1.15	545.60	15.38	0.89
UHHD9N	X	760.70	299.15	24.55	747.46	217.24	12.58
UVLZFK		464.80	3.25	0.27	545.20	14.98	0.87
UWJW39		449.40	-12.15	-1.00	512.60	-17.62	-1.02
V68WMX	X	514.82	53.27	4.37	552.28	22.06	1.28
VQPHVD		454.00	-7.55	-0.62	517.00	-13.22	-0.77
WJ9CH7		446.40	-15.15	-1.24	520.80	-9.42	-0.55
XX388H		463.20	1.65	0.14	544.60	14.38	0.83
YQ32CF		459.00	-2.55	-0.21	525.20	-5.02	-0.29
YUVCYY		468.80	7.25	0.60	517.60	-12.62	-0.73
Z6AQE8		457.80	-3.75	-0.31	506.40	-23.82	-1.38
ZT4QTF		468.40	6.85	0.56	531.60	1.38	0.08
ZXT7HM		477.40	15.85	1.30	553.40	23.18	1.34

Summary Statistics

	Sample S41		Sample S42	
Grand Means	461.55	HK 500 gf	530.22	HK 500 gf
Stnd Dev Btwn Labs	12.19	HK 500 gf	17.26	HK 500 gf

Samples S41, S42 : Steel, Steel

Statistics based on 77 of 85 reporting participants

Comments on Assigned Data Flags for Test #121

76W3NF (X) - Data for both samples are high.

CJBU2G (X) - Data for sample S42 are high.

GEKJ4R (X) - Data for sample S42 are low.

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

KEA323 (X) - Data for both samples are high.

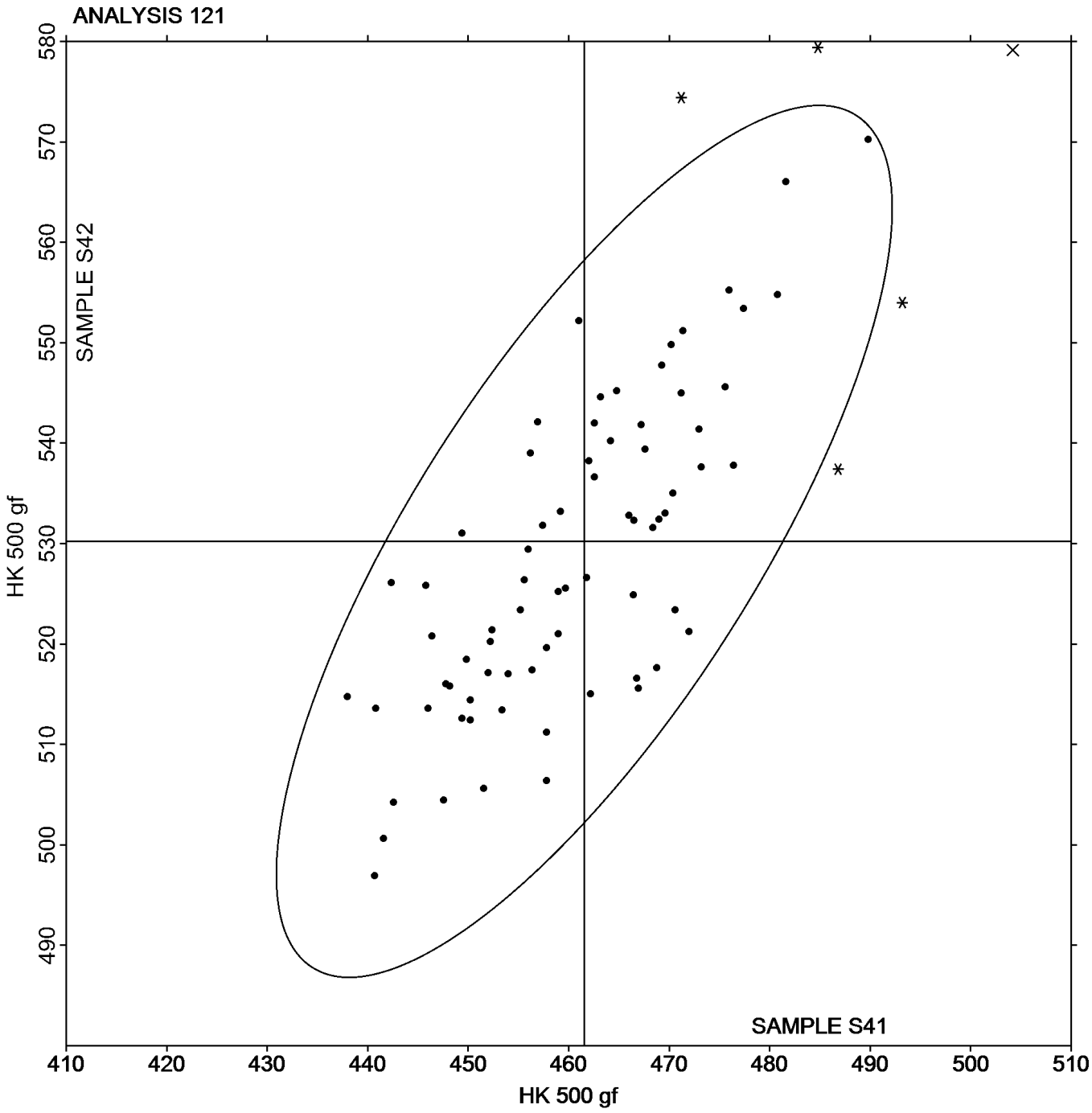
L2GGH8 (X) - Data for both samples are high. Inconsistent within the determinations of sample S42.

UHHD9N (X) - Data for both samples are high. Inconsistent within the determinations of both samples.

V68WMX (X) - Data for sample S41 are high. Inconsistent within the determinations of both samples.

SAMPLE S41
461.55 HK 500 gf

SAMPLE S42
530.22 HK 500 gf



		Sample S41			Sample S42		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
2XTMVB		463.60	-12.95	-0.72	528.80	-19.94	-0.83
3PBCHB		456.42	-20.13	-1.11	537.46	-11.28	-0.47
6FGZBL		467.38	-9.17	-0.51	521.92	-26.82	-1.12
6FYFGV		467.40	-9.15	-0.51	537.00	-11.74	-0.49
6PLVGX		475.80	-0.75	-0.04	553.00	4.26	0.18
7CEE3F		445.40	-31.15	-1.72	509.60	-39.14	-1.64
924TRJ		457.60	-18.95	-1.05	537.40	-11.34	-0.47
926JZM		468.90	-7.65	-0.42	556.66	7.92	0.33
926QY9		472.60	-3.95	-0.22	542.60	-6.14	-0.26
9X4PWQ		492.80	16.25	0.90	559.40	10.66	0.45
A6LEVQ		467.28	-9.27	-0.51	522.04	-26.70	-1.12
AVGDKR		486.44	9.89	0.55	543.58	-5.16	-0.22
BDRRFQ		479.00	2.45	0.14	546.20	-2.54	-0.11
BM2YFZ		504.60	28.05	1.55	574.80	26.06	1.09
CCQTJJ		474.20	-2.35	-0.13	547.60	-1.14	-0.05
CJBU2G	*	478.17	1.62	0.09	591.20	42.45	1.77
CZ2WHK		478.00	1.45	0.08	540.40	-8.34	-0.35
DHVEZ7		483.40	6.85	0.38	559.40	10.66	0.45
DWXV4L		475.20	-1.35	-0.07	565.80	17.06	0.71
DXBBLU		479.00	2.45	0.14	534.40	-14.34	-0.60
EHCQKW		478.40	1.85	0.10	552.20	3.46	0.14
EZAMKL		472.80	-3.75	-0.21	525.40	-23.34	-0.98
F6ZKMH		502.60	26.05	1.44	599.40	50.66	2.12
FRDMTR		480.80	4.25	0.23	546.60	-2.14	-0.09
GEKJ4R		506.20	29.65	1.64	577.60	28.86	1.21
GEL9BB		490.00	13.45	0.74	547.40	-1.34	-0.06
HBVTVY		500.24	23.69	1.31	601.82	53.08	2.22
J3JWN8		482.40	5.85	0.32	562.00	13.26	0.55
KAGYEP		464.80	-11.75	-0.65	527.40	-21.34	-0.89
KZCP8Z		450.00	-26.55	-1.47	499.60	-49.14	-2.05
L2GGH8	X	540.20	63.65	3.52	675.60	126.86	5.30
LFHFGH	X	569.00	92.45	5.12	587.80	39.06	1.63
LJYXKL		464.80	-11.75	-0.65	532.20	-16.54	-0.69
LU2834		478.80	2.25	0.12	569.60	20.86	0.87
MYCTB2	*	425.60	-50.95	-2.82	506.62	-42.12	-1.76
N3LDNZ		487.80	11.25	0.62	552.20	3.46	0.14
N6VVXC		474.90	-1.65	-0.09	547.52	-1.22	-0.05
NNP2FW		457.02	-19.53	-1.08	510.44	-38.30	-1.60
P66RUL		470.00	-6.55	-0.36	509.00	-39.74	-1.66
PHUL7F		450.00	-26.55	-1.47	515.80	-32.94	-1.38
PKH3H9		463.60	-12.95	-0.72	551.40	2.66	0.11
QKYEXT		474.40	-2.15	-0.12	554.60	5.86	0.24
RHRHRV		482.40	5.85	0.32	562.40	13.66	0.57
RUYLTJ	*	428.08	-48.47	-2.68	514.04	-34.70	-1.45
TWKPZG		503.00	26.45	1.46	577.20	28.46	1.19
U2CN4X		468.20	-8.35	-0.46	540.20	-8.54	-0.36
U2TDDH		471.36	-5.19	-0.29	546.14	-2.60	-0.11

		Sample S41			Sample S42		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
U6V6TB		504.00	27.45	1.52	585.40	36.66	1.53
UA8NF6		496.20	19.65	1.09	581.20	32.46	1.36
UH287R		504.80	28.25	1.56	573.60	24.86	1.04
UHHD9N	X	732.30	255.75	14.16	747.50	198.76	8.30
UVLZFK		485.20	8.65	0.48	555.80	7.06	0.29
V68WMX		516.62	40.07	2.22	588.12	39.38	1.65
WJ9CH7		469.60	-6.95	-0.38	537.60	-11.14	-0.47
XX388H		470.40	-6.15	-0.34	571.80	23.06	0.96
YQ32CF		485.80	9.25	0.51	542.00	-6.74	-0.28
YUVCYY		495.60	19.05	1.05	535.40	-13.34	-0.56
Z6AQE8		473.60	-2.95	-0.16	547.40	-1.34	-0.06
ZT4QTF		486.40	9.85	0.54	548.20	-0.54	-0.02
ZXT7HM		474.00	-2.55	-0.14	573.80	25.06	1.05

Summary Statistics

	Sample S41		Sample S42	
Grand Means	476.55	HK 200 gf	548.74	HK 200 gf
Stnd Dev Btwn Labs	18.07	HK 200 gf	23.94	HK 200 gf

Samples S41, S42 : Steel, Steel

Statistics based on 57 of 60 reporting participants

Comments on Assigned Data Flags for Test #122

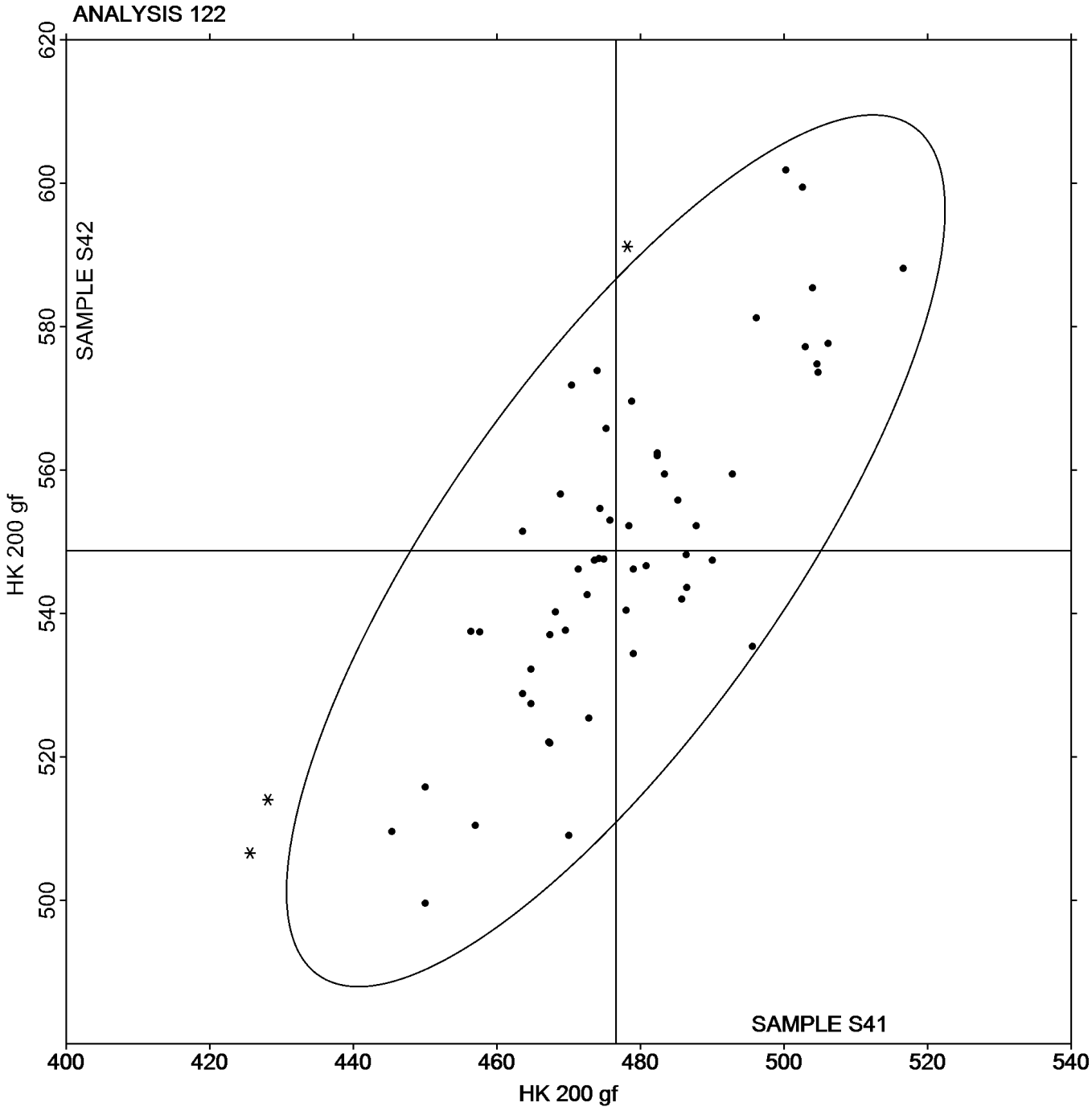
L2GGH8 (X) - Data for both samples are high. Inconsistent within the determinations of sample S41.

LFHFGH (X) - Data for sample S41 are high.

UHHD9N (X) - Data for both samples are high. Inconsistent within the determinations of sample S42.

SAMPLE S41
476.55 HK 200 gf

SAMPLE S42
548.74 HK 200 gf



		Sample S41			Sample S42		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
28VUPP		454.64	6.68	0.53	516.78	-5.90	-0.33
2N4ULZ		459.40	11.44	0.91	529.00	6.32	0.36
2XTMVB		436.60	-11.36	-0.90	507.80	-14.88	-0.84
4ZBBM2		448.40	0.44	0.03	522.80	0.12	0.01
6DUBYL		439.00	-8.96	-0.71	496.00	-26.68	-1.50
6FYFGV		422.20	-25.76	-2.04	492.80	-29.88	-1.68
6PL633		446.60	-1.36	-0.11	519.60	-3.08	-0.17
6XJ8FV	X	496.00	48.04	3.80	558.00	35.32	1.99
6ZH86B		452.40	4.44	0.35	517.40	-5.28	-0.30
76W3NF	*	478.80	30.84	2.44	547.80	25.12	1.41
76W6EJ		439.40	-8.56	-0.68	504.38	-18.30	-1.03
7MEWLV		433.48	-14.48	-1.15	484.86	-37.82	-2.13
7TWGFV		449.00	1.04	0.08	523.20	0.52	0.03
7Y6TJM		457.40	9.44	0.75	545.00	22.32	1.26
8PFCGZ		437.80	-10.16	-0.80	507.20	-15.48	-0.87
8WGLUK		445.24	-2.72	-0.22	520.32	-2.36	-0.13
8Y2Q7N		455.60	7.64	0.60	539.60	16.92	0.95
924TRJ		449.80	1.84	0.15	510.80	-11.88	-0.67
926QY9		442.60	-5.36	-0.42	504.80	-17.88	-1.01
9BBRYY		469.80	21.84	1.73	533.40	10.72	0.60
9X4PWQ		458.20	10.24	0.81	527.60	4.92	0.28
AHM97Y		462.20	14.24	1.13	538.80	16.12	0.91
AVGDKR		436.62	-11.34	-0.90	507.36	-15.32	-0.86
B6ZCMG		456.34	8.38	0.66	534.66	11.98	0.67
BDRRFQ		443.20	-4.76	-0.38	524.20	1.52	0.09
BEHV37		443.20	-4.76	-0.38	510.40	-12.28	-0.69
BHARXR		439.20	-8.76	-0.69	508.20	-14.48	-0.81
BJDWXT		460.00	12.04	0.95	548.60	25.92	1.46
BM2YFZ		475.20	27.24	2.16	547.60	24.92	1.40
CCQTJJ		455.20	7.24	0.57	532.60	9.92	0.56
CJBU2G	*	454.33	6.37	0.50	557.39	34.71	1.95
CRTNCX		434.80	-13.16	-1.04	506.80	-15.88	-0.89
CVNJTC		435.20	-12.76	-1.01	523.40	0.72	0.04
CZ2WHK		461.00	13.04	1.03	520.20	-2.48	-0.14
DHVEZ7		457.20	9.24	0.73	521.40	-1.28	-0.07
DMAZ67		466.60	18.64	1.48	547.60	24.92	1.40
DXBBLU		442.40	-5.56	-0.44	509.20	-13.48	-0.76
EHCQKW		435.00	-12.96	-1.03	513.80	-8.88	-0.50
ERVARA		456.40	8.44	0.67	528.00	5.32	0.30
EYFCWQ		448.80	0.84	0.07	523.40	0.72	0.04
EZAMKL		443.20	-4.76	-0.38	515.00	-7.68	-0.43
F6ZKMH		472.40	24.44	1.93	564.80	42.12	2.37
FDC2A3		468.60	20.64	1.63	561.40	38.72	2.18
FE9LW3		443.36	-4.60	-0.36	520.22	-2.46	-0.14
FRDMTR		437.80	-10.16	-0.80	507.80	-14.88	-0.84
FXMRR8		457.51	9.55	0.76	539.01	16.33	0.92
FZM8U3		434.60	-13.36	-1.06	493.80	-28.88	-1.62

		Sample S41			Sample S42		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
GEL9BB		454.60	6.64	0.53	523.00	0.32	0.02
GPPLBB		458.20	10.24	0.81	546.60	23.92	1.35
HBVTVY		456.81	8.85	0.70	541.15	18.47	1.04
HEH2PU		430.60	-17.36	-1.37	496.40	-26.28	-1.48
J3JWN8		443.60	-4.36	-0.34	526.40	3.72	0.21
JG6A6M		446.80	-1.16	-0.09	524.40	1.72	0.10
JHF6UL		451.80	3.84	0.30	517.00	-5.68	-0.32
JPXMZG		461.30	13.34	1.06	528.34	5.66	0.32
JUAZVG		448.20	0.24	0.02	517.60	-5.08	-0.29
JZGPRA		457.00	9.04	0.72	540.40	17.72	1.00
KAGYEP		436.00	-11.96	-0.95	504.80	-17.88	-1.01
KEA323		441.58	-6.38	-0.50	519.90	-2.78	-0.16
KRY3R6		479.08	31.12	2.46	557.80	35.12	1.97
KUMAG8		447.80	-0.16	-0.01	524.40	1.72	0.10
KZCP8Z	*	416.00	-31.96	-2.53	490.60	-32.08	-1.80
L2GGH8		468.40	20.44	1.62	562.80	40.12	2.26
LB7MAQ		441.80	-6.16	-0.49	533.60	10.92	0.61
LFHFGH		448.80	0.84	0.07	529.80	7.12	0.40
LJYXKL		427.40	-20.56	-1.63	490.80	-31.88	-1.79
LMMAJQ		448.20	0.24	0.02	523.40	0.72	0.04
LU2834		453.00	5.04	0.40	521.60	-1.08	-0.06
M8L87B		434.44	-13.52	-1.07	505.38	-17.30	-0.97
ML4W8Y		445.40	-2.56	-0.20	518.40	-4.28	-0.24
MMYF8F		435.34	-12.62	-1.00	515.04	-7.64	-0.43
N2FL7L		448.00	0.04	0.00	526.80	4.12	0.23
N3LDNZ		440.80	-7.16	-0.57	536.00	13.32	0.75
N6VR99		443.60	-4.36	-0.34	533.60	10.92	0.61
N6VVXC		439.92	-8.04	-0.64	518.68	-4.00	-0.23
NHWYAB		463.20	15.24	1.21	548.80	26.12	1.47
NJXPN7		467.40	19.44	1.54	553.20	30.52	1.72
NNP2FW		428.68	-19.28	-1.53	492.94	-29.74	-1.67
P66RUL		434.40	-13.56	-1.07	509.20	-13.48	-0.76
P8UYEJ		443.80	-4.16	-0.33	527.80	5.12	0.29
PEFTBG		456.20	8.24	0.65	535.20	12.52	0.70
PHUL7F		430.40	-17.56	-1.39	498.20	-24.48	-1.38
PKH3H9		461.40	13.44	1.06	540.00	17.32	0.97
QKYEXT		447.40	-0.56	-0.04	524.80	2.12	0.12
QN38WX		456.80	8.84	0.70	538.20	15.52	0.87
QQMC92		445.40	-2.56	-0.20	516.00	-6.68	-0.38
QR2N6L		428.60	-19.36	-1.53	494.80	-27.88	-1.57
QR47BW		447.00	-0.96	-0.08	510.40	-12.28	-0.69
QX6MHW		453.80	5.84	0.46	509.80	-12.88	-0.72
RAA8C9		459.40	11.44	0.91	533.60	10.92	0.61
RHRHRV		450.60	2.64	0.21	516.40	-6.28	-0.35
RUYLTJ		419.14	-28.82	-2.28	484.06	-38.62	-2.17
RZC6FR		444.40	-3.56	-0.28	517.60	-5.08	-0.29
T62W8L		421.60	-26.36	-2.09	495.20	-27.48	-1.55

		Sample S41			Sample S42		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
TNVWWW		449.20	1.24	0.10	533.60	10.92	0.61
TWKPZG		440.60	-7.36	-0.58	532.00	9.32	0.52
U2CN4X		433.80	-14.16	-1.12	516.80	-5.88	-0.33
U2TDDH		455.16	7.20	0.57	508.04	-14.64	-0.82
U6V6TB	*	439.20	-8.76	-0.69	540.20	17.52	0.99
UA8NF6		465.00	17.04	1.35	550.60	27.92	1.57
UH287R	X	430.00	-17.96	-1.42	438.40	-84.28	-4.74
UHHD9N	X	645.94	197.98	15.67	716.38	193.70	10.89
UHZKCK		453.60	5.64	0.45	526.20	3.52	0.20
UVLZFK		445.20	-2.76	-0.22	516.00	-6.68	-0.38
UWJW39		435.80	-12.16	-0.96	498.00	-24.68	-1.39
V68WMX	*	476.74	28.78	2.28	542.46	19.78	1.11
VQQ82V		454.40	6.44	0.51	528.00	5.32	0.30
WJ9CH7		424.20	-23.76	-1.88	504.80	-17.88	-1.01
WQ3JZC		449.82	1.86	0.15	534.42	11.74	0.66
XGB6FZ		449.58	1.62	0.13	525.64	2.96	0.17
XX388H		446.60	-1.36	-0.11	528.20	5.52	0.31
Y6XY4X		447.88	-0.08	-0.01	508.04	-14.64	-0.82
YH2VCJ	X	451.82	3.86	0.31	563.70	41.02	2.31
YQ32CF		446.80	-1.16	-0.09	517.40	-5.28	-0.30
YW68T4		459.80	11.84	0.94	554.00	31.32	1.76
Z6AQE8		438.20	-9.76	-0.77	502.80	-19.88	-1.12
Z78WZ8		443.20	-4.76	-0.38	519.60	-3.08	-0.17
ZT4QTF		449.80	1.84	0.15	512.20	-10.48	-0.59
ZXT7HM		449.80	1.84	0.15	532.00	9.32	0.52

Summary Statistics

	Sample S41		Sample S42	
Grand Means	447.96	HV 500 gf	522.68	HV 500 gf
Stnd Dev Btwn Labs	12.63	HV 500 gf	17.78	HV 500 gf

Samples S41, S42 : Steel, Steel

Statistics based on 115 of 119 reporting participants

Comments on Assigned Data Flags for Test #123

6XJ8FV (X) - Data for sample S41 are high.

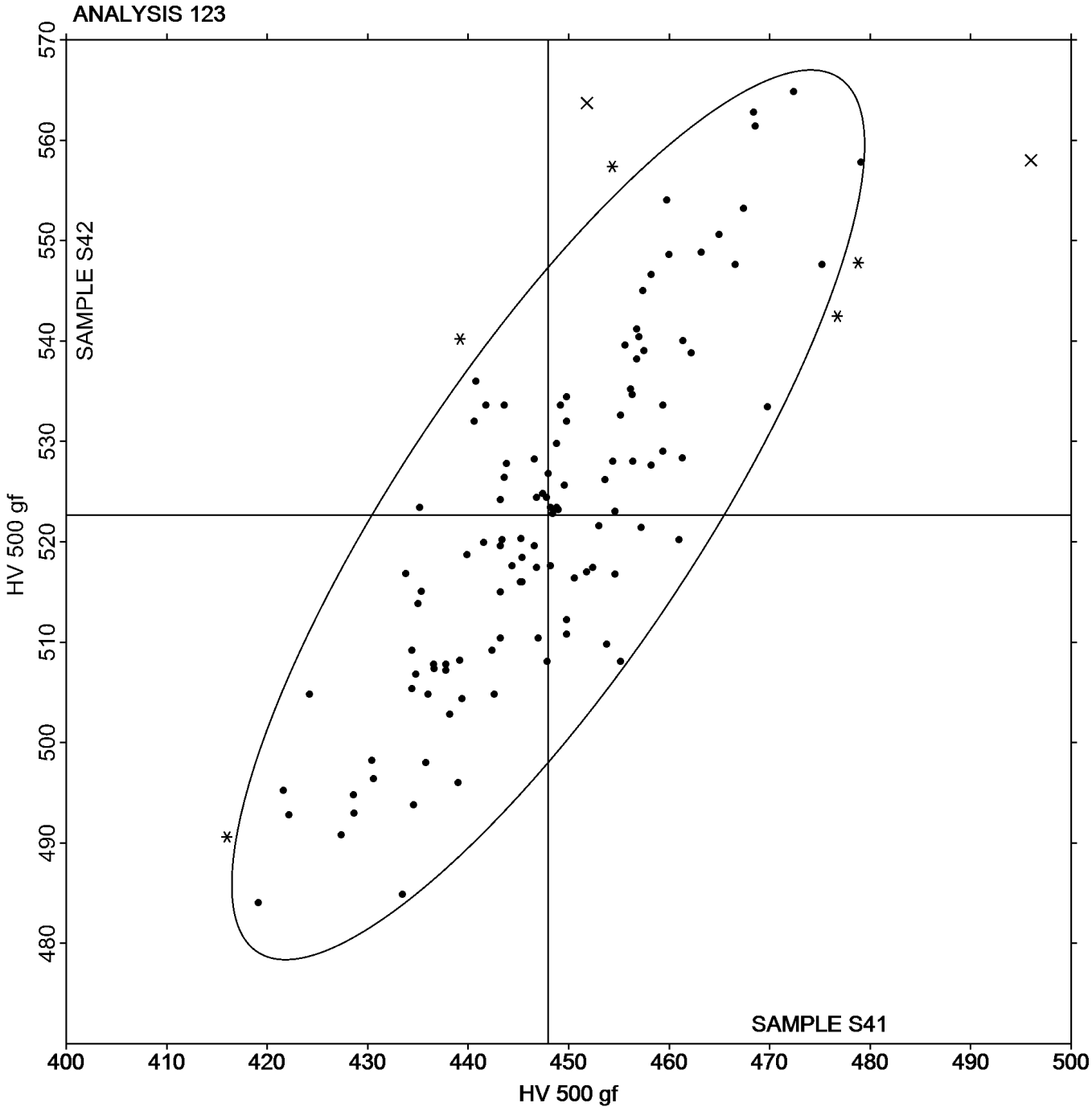
UH287R (X) - Data for sample S42 are low.

UHHD9N (X) - Data for both samples are high. Inconsistent within the determinations of both samples.

YH2VCJ (X) - Inconsistent in testing between samples.

SAMPLE S41
447.96 HV 500 gf

SAMPLE S42
522.68 HV 500 gf



		Sample D41			Sample D42		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
28DWJ6		357.60	1.83	0.26	388.00	-0.24	-0.02
3KZDX4	X	341.00	-14.77	-2.14	398.40	10.16	1.03
46FAV7		363.00	7.23	1.05	388.00	-0.24	-0.02
47A3N4		361.80	6.03	0.87	398.00	9.76	0.99
4WQNMM		351.40	-4.37	-0.63	388.00	-0.24	-0.02
4XHMZZ		360.00	4.23	0.61	380.80	-7.44	-0.76
6XJ8FV		366.80	11.03	1.59	405.80	17.56	1.79
6ZH86B		352.00	-3.77	-0.55	377.40	-10.84	-1.10
72QPYZ		368.00	12.23	1.77	403.40	15.16	1.54
76W3NF		361.40	5.63	0.81	388.40	0.16	0.02
7CTAEV		360.00	4.23	0.61	399.60	11.36	1.16
7H29XT		361.74	5.97	0.86	395.98	7.74	0.79
7MCEEK		363.00	7.23	1.05	388.00	-0.24	-0.02
7TWGFV		352.40	-3.37	-0.49	392.80	4.56	0.46
86AYRY		354.40	-1.37	-0.20	383.20	-5.04	-0.51
87MJMU		352.00	-3.77	-0.55	388.00	-0.24	-0.02
8JAXFV		352.00	-3.77	-0.55	375.00	-13.24	-1.35
94ADFJ		354.80	-0.97	-0.14	383.20	-5.04	-0.51
9GZ4JV		359.92	4.15	0.60	388.30	0.06	0.01
9X4PWQ		354.80	-0.97	-0.14	396.20	7.96	0.81
A6LHKU	X	370.00	14.23	2.06	310.00	-78.24	-7.96
A7VHNG		364.40	8.63	1.25	386.20	-2.04	-0.21
BDRRFQ		341.00	-14.77	-2.14	377.60	-10.64	-1.08
BEHV37		358.80	3.03	0.44	389.40	1.16	0.12
CCQTJJ		351.60	-4.17	-0.60	382.80	-5.44	-0.55
CRTNCX		345.00	-10.77	-1.56	379.60	-8.64	-0.88
CTWM2X		346.40	-9.37	-1.36	376.20	-12.04	-1.23
CVNJTC		350.00	-5.77	-0.83	378.40	-9.84	-1.00
DX69LN	*	363.20	7.43	1.07	414.60	26.36	2.68
DXBBLU		341.00	-14.77	-2.14	375.00	-13.24	-1.35
EGEP6R		362.40	6.63	0.96	407.40	19.16	1.95
F6ZKMH		359.00	3.23	0.47	401.00	12.76	1.30
FF38QT		347.40	-8.37	-1.21	377.60	-10.64	-1.08
FRDMTR		366.60	10.83	1.57	405.00	16.76	1.70
FZM8U3		360.20	4.43	0.64	388.00	-0.24	-0.02
G7B67W	*	341.00	-14.77	-2.14	363.00	-25.24	-2.57
GEL9BB		356.30	0.53	0.08	385.14	-3.10	-0.32
GEZ2KJ	*	365.40	9.63	1.39	415.00	26.76	2.72
GXXUJJ		363.00	7.23	1.05	401.00	12.76	1.30
HGNLDU	*	341.00	-14.77	-2.14	388.00	-0.24	-0.02
JHF6UL		352.80	-2.97	-0.43	388.00	-0.24	-0.02
K4DVNQ		365.40	9.63	1.39	395.40	7.16	0.73
KAGYEP		352.00	-3.77	-0.55	388.00	-0.24	-0.02
LFHFGH		345.40	-10.37	-1.50	375.00	-13.24	-1.35
LJGYGV		360.80	5.03	0.73	380.20	-8.04	-0.82
LJYXKL		350.26	-5.51	-0.80	377.60	-10.64	-1.08
LLKTXD		360.20	4.43	0.64	396.60	8.36	0.85

		Sample D41			Sample D42		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
LMYNRF		361.60	5.83	0.84	400.60	12.36	1.26
MMWFZ8		352.00	-3.77	-0.55	388.00	-0.24	-0.02
NA4N22		363.00	7.23	1.05	388.00	-0.24	-0.02
NBGBHV		355.94	0.17	0.02	396.06	7.82	0.80
NWH9Y3		353.00	-2.77	-0.40	381.20	-7.04	-0.72
P4ZY4U		349.60	-6.17	-0.89	382.60	-5.64	-0.57
P8UYEJ		354.80	-0.97	-0.14	393.80	5.56	0.57
PBUA7C		362.20	6.43	0.93	404.40	16.16	1.64
PWD9DT		355.00	-0.77	-0.11	388.00	-0.24	-0.02
QHA8DW		352.00	-3.77	-0.55	388.00	-0.24	-0.02
QKYEXT		347.60	-8.17	-1.18	381.60	-6.64	-0.68
QR47BW		354.00	-1.77	-0.26	379.60	-8.64	-0.88
RCK6UW		363.00	7.23	1.05	388.00	-0.24	-0.02
RH73DD		361.00	5.23	0.76	383.80	-4.44	-0.45
RHM2RB		360.20	4.43	0.64	394.60	6.36	0.65
RW6YKJ		352.00	-3.77	-0.55	388.00	-0.24	-0.02
RZC6FR		353.40	-2.37	-0.34	373.00	-15.24	-1.55
T2Y48V		364.00	8.23	1.19	385.80	-2.44	-0.25
TAQJUE		355.70	-0.07	-0.01	383.80	-4.44	-0.45
TT6ZYR		354.00	-1.77	-0.26	383.80	-4.44	-0.45
TWKPZG		352.20	-3.57	-0.52	387.80	-0.44	-0.04
U6V6TB		351.40	-4.37	-0.63	379.20	-9.04	-0.92
UA8NF6		353.80	-1.97	-0.29	399.00	10.76	1.09
UAKNND	X	3.200	-352.57	-50.98	3.100	-385.14	-39.18
UWJW39		353.60	-2.17	-0.31	386.20	-2.04	-0.21
V33T7A		358.00	2.23	0.32	387.00	-1.24	-0.13
VNMGTV		358.80	3.03	0.44	387.00	-1.24	-0.13
VXC6PH		356.12	0.35	0.05	382.68	-5.56	-0.57
X23GDE		347.00	-8.77	-1.27	379.00	-9.24	-0.94
X633GX		364.80	9.03	1.31	405.60	17.36	1.77
XLQD4Z		363.60	7.83	1.13	390.00	1.76	0.18
XX388H		345.00	-10.77	-1.56	383.00	-5.24	-0.53
YQ32CF		343.00	-12.77	-1.85	379.80	-8.44	-0.86
YW68T4		349.20	-6.57	-0.95	381.20	-7.04	-0.72
Z6AQE8		366.40	10.63	1.54	406.80	18.56	1.89
Z78WZ8		352.80	-2.97	-0.43	382.60	-5.64	-0.57
ZT4QTF		351.00	-4.77	-0.69	380.40	-7.84	-0.80
ZV8944		365.00	9.23	1.33	386.00	-2.24	-0.23

Summary Statistics

	Sample D41		Sample D42	
Grand Means	355.77	HBW	388.24	HBW
Stnd Dev Btwn Labs	6.92	HBW	9.83	HBW

Samples D41, D42 : Steel, Steel

Statistics based on 82 of 85 reporting participants

Samples D41, D42 are hardness test blocks made from steel. The blocks are heat treated to hardness levels specified by CTS.

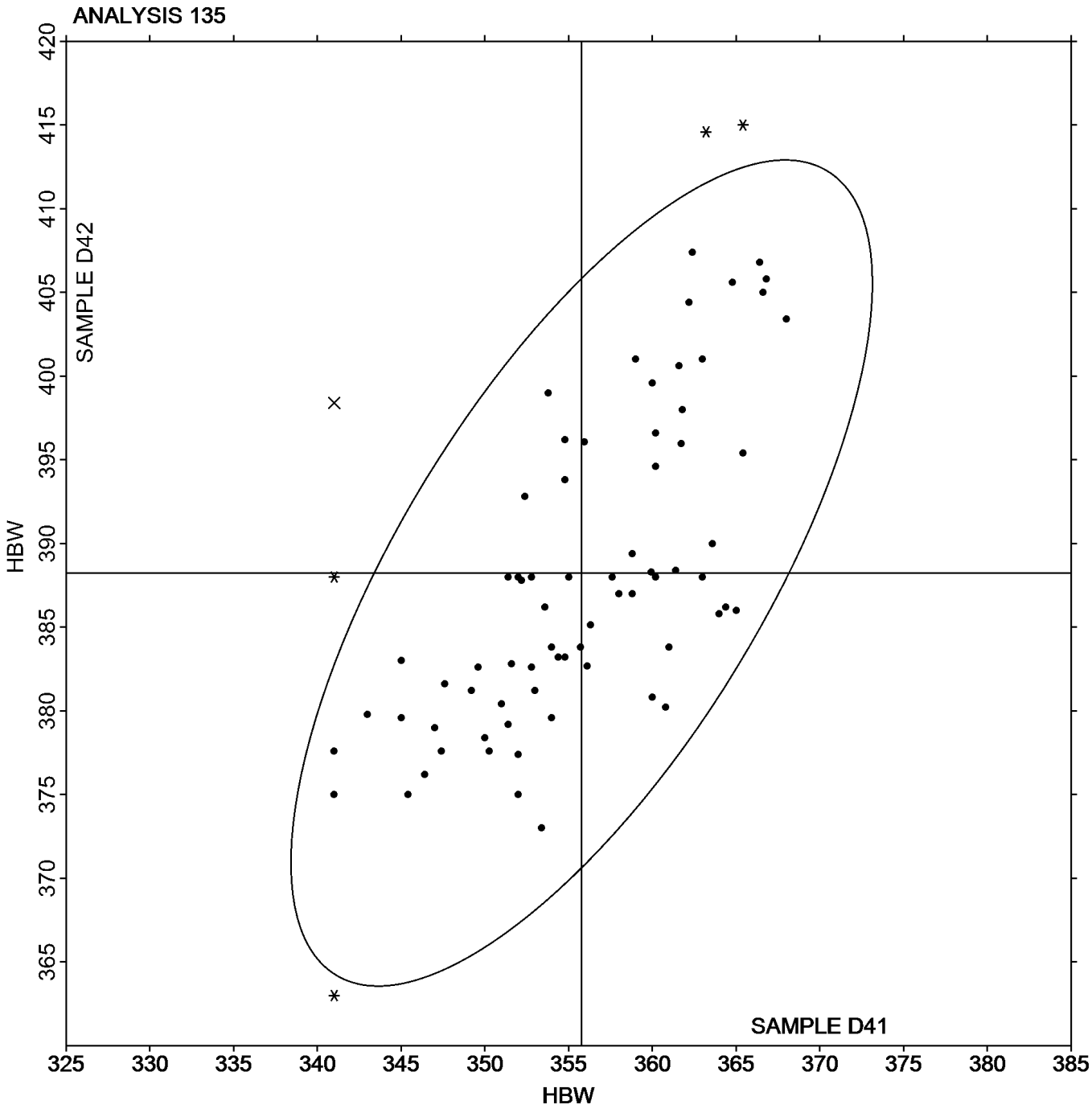
Comments on Assigned Data Flags for Test #135

3KZDX4 (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample D42.

A6LHKU (X) - Data for sample D42 are low.

UAKNND (X) - Data for both samples are low. Possibly reported impression diameter in lieu of HBW value.

SAMPLE D41	SAMPLE D42
355.77 HBW	388.24 HBW



		Sample P41			Sample P42		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
28DWJ6	*	74.00	1.05	1.31	72.60	-0.02	-0.02
2AG4PX		72.89	-0.06	-0.08	72.50	-0.12	-0.14
47A3N4		73.00	0.05	0.06	72.90	0.28	0.33
4KBMCM		72.70	-0.25	-0.31	72.20	-0.42	-0.49
4XHMZZ		72.57	-0.38	-0.48	72.03	-0.59	-0.69
66Y9UP		74.36	1.41	1.77	73.75	1.13	1.33
6BZRMM	*	70.59	-2.36	-2.96	70.46	-2.16	-2.54
6TKHLL	X	70.79	-2.16	-2.71	69.40	-3.22	-3.79
72QPYZ		72.40	-0.55	-0.69	72.10	-0.52	-0.61
76W3NF		73.00	0.05	0.06	73.20	0.58	0.68
7HXWZN		73.36	0.41	0.51	72.90	0.28	0.32
7TWGFV		72.18	-0.78	-0.97	72.15	-0.47	-0.56
8J9U9Y		73.00	0.05	0.06	73.10	0.48	0.56
924TRJ		72.10	-0.85	-1.06	71.70	-0.92	-1.08
926QY9		72.40	-0.55	-0.69	72.40	-0.22	-0.26
94ADFJ		73.25	0.30	0.38	72.84	0.22	0.26
9QLDHP	X	74.27	1.32	1.66	72.13	-0.50	-0.58
A6LHKU	X	68.70	-4.25	-5.32	67.90	-4.72	-5.54
BDRRFQ		74.46	1.51	1.89	73.89	1.27	1.49
BHMJJG		73.60	0.65	0.81	73.30	0.68	0.80
BK7KKV		73.00	0.05	0.06	72.70	0.08	0.09
BPJVMK		73.60	0.65	0.81	73.10	0.48	0.56
CTWM2X		73.10	0.15	0.19	71.80	-0.82	-0.96
D4FCK3		73.90	0.95	1.19	73.40	0.78	0.92
DXBBLU		72.90	-0.05	-0.06	72.40	-0.22	-0.26
EGEP6R		72.20	-0.75	-0.94	72.30	-0.32	-0.38
EP76WG	*	71.59	-1.36	-1.70	70.50	-2.12	-2.49
EYXLLL		73.10	0.15	0.19	71.79	-0.83	-0.97
FDC2A3		74.10	1.15	1.44	74.00	1.38	1.62
FDWPPC	*	73.24	0.29	0.37	73.97	1.35	1.58
FF38QT		72.90	-0.05	-0.06	72.60	-0.02	-0.02
FRDMTR		72.40	-0.55	-0.69	72.10	-0.52	-0.61
FYVB8U		72.20	-0.75	-0.94	72.80	0.18	0.21
FZM8U3		71.16	-1.79	-2.25	71.29	-1.33	-1.57
G7B67W		73.92	0.97	1.21	73.33	0.71	0.84
G9YJU8		72.90	-0.05	-0.06	73.10	0.48	0.56
GPPLBB		71.90	-1.05	-1.32	71.20	-1.42	-1.67
GVD4R8		73.10	0.15	0.19	72.70	0.08	0.09
GXXUJJ		73.40	0.45	0.56	72.60	-0.02	-0.02
HBVTVY		72.66	-0.29	-0.36	72.24	-0.38	-0.44
HGNLDU		72.10	-0.85	-1.06	71.80	-0.82	-0.96
HK8TPA	X	70.38	-2.57	-3.22	70.79	-1.84	-2.16
J4WGKN		73.50	0.55	0.69	73.30	0.68	0.80
JEBKHL		72.90	-0.05	-0.06	72.20	-0.42	-0.49
K7GX4U		73.83	0.88	1.10	73.29	0.67	0.79
K7W2XL		72.39	-0.56	-0.70	72.77	0.15	0.18
KAGYEP		73.50	0.55	0.69	73.00	0.38	0.45

		Sample P41			Sample P42		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
LMYNRF		73.11	0.16	0.20	72.40	-0.23	-0.27
LPBN82		74.10	1.15	1.44	74.10	1.48	1.74
M7M2PG		73.60	0.65	0.81	73.20	0.58	0.68
N2FL7L		73.00	0.05	0.06	72.70	0.08	0.09
NNP2FW		72.40	-0.55	-0.69	73.10	0.48	0.56
NPZBJA		73.12	0.17	0.21	72.81	0.19	0.22
NPZZCQ		72.86	-0.09	-0.11	72.56	-0.06	-0.07
P4ZY4U		73.65	0.70	0.88	73.26	0.64	0.75
P8UYEJ		72.80	-0.15	-0.19	72.60	-0.02	-0.02
PN4EA7		71.79	-1.16	-1.45	71.50	-1.12	-1.31
PWD9DT		72.95	0.00	0.01	72.52	-0.10	-0.12
QF9YDT		74.00	1.05	1.31	73.40	0.78	0.92
QHA8DW		72.00	-0.95	-1.19	71.60	-1.02	-1.20
QLCFV9		74.93	1.97	2.47	74.34	1.72	2.02
QNHZJ9		73.48	0.53	0.66	72.94	0.32	0.37
QR47BW		73.40	0.45	0.56	72.80	0.18	0.21
RW6YKJ		72.80	-0.15	-0.19	72.20	-0.42	-0.49
T2Y48V	X	77.02	4.07	5.09	74.38	1.76	2.06
TAQLGX		71.09	-1.86	-2.33	71.08	-1.54	-1.81
TN9BFZ	X	72.08	-0.87	-1.09	70.26	-2.36	-2.78
TT6ZYR	X	74.00	1.05	1.31	71.30	-1.32	-1.55
TWKPZG		72.40	-0.55	-0.69	72.20	-0.42	-0.49
U2TDDH		72.66	-0.29	-0.36	72.37	-0.25	-0.29
UA8NF6		72.81	-0.14	-0.18	72.68	0.06	0.07
UAKNND		72.38	-0.57	-0.71	72.50	-0.12	-0.15
ULJFFD		73.00	0.05	0.06	72.60	-0.02	-0.02
V33T7A		72.98	0.03	0.04	73.34	0.72	0.84
VGHVNX		73.91	0.96	1.20	73.45	0.83	0.97
VXC6PH		72.48	-0.47	-0.59	71.62	-1.00	-1.17
WLQF9P		72.80	-0.15	-0.19	71.40	-1.22	-1.43
WVH2AG		73.90	0.95	1.19	74.16	1.54	1.81
X23GDE		73.53	0.58	0.73	72.81	0.19	0.22
XLQD4Z	X	75.82	2.87	3.59	75.45	2.83	3.32
XQZ2QU	*	71.53	-1.42	-1.78	70.46	-2.16	-2.54
Y6XY4X		72.17	-0.78	-0.97	72.60	-0.02	-0.03
YKVLJJ		73.50	0.55	0.69	73.60	0.98	1.15
YQ32CF		73.16	0.21	0.26	72.19	-0.43	-0.51
YV87KR		73.15	0.20	0.25	73.21	0.59	0.69
Z6AQE8		72.50	-0.45	-0.56	72.10	-0.52	-0.61
Z78WZ8		72.81	-0.14	-0.18	72.64	0.01	0.02
ZT4QTF		72.30	-0.65	-0.81	72.10	-0.52	-0.61
ZV8944	*	74.55	1.60	2.00	74.84	2.22	2.61

Summary Statistics

	Sample P41		Sample P42	
Grand Means	72.95	ksi	72.62	ksi
Stnd Dev Btwn Labs	0.80	ksi	0.85	ksi

Samples P41, P42 : AISI 1018 (E), AISI 1018 (F)

Statistics based on 81 of 89 reporting participants

Comments on Assigned Data Flags for Test #140

6TKHLL (X) - Data for sample P42 are low.

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

A6LHKU (X) - Data for both samples are low. Possible Systematic Error.

HK8TPA (X) - Data for sample P41 are low.

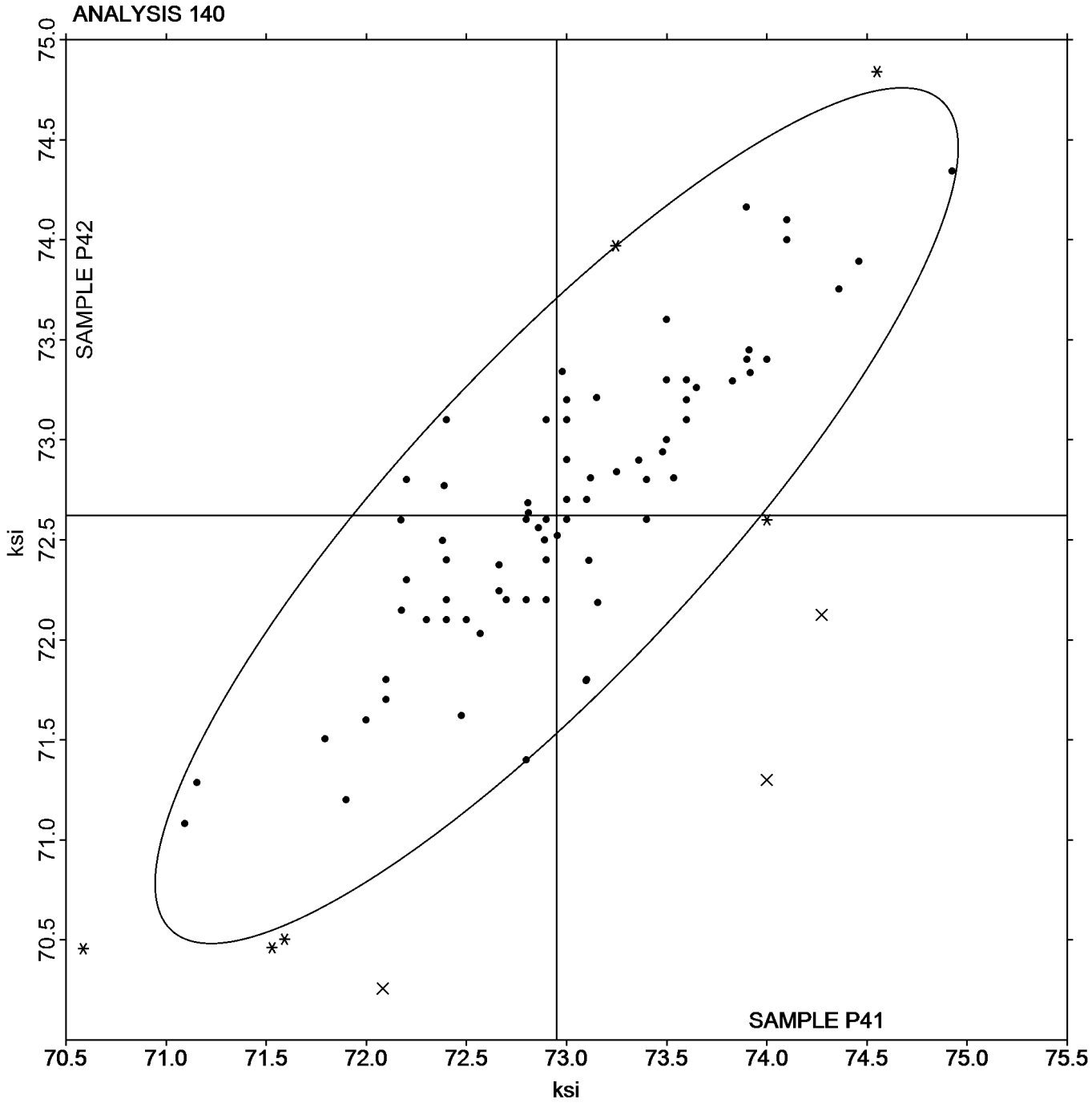
T2Y48V (X) - Data for sample P41 are high.

TN9BFZ (X) - Data for sample P42 are low.

TT6ZYR (X) - Inconsistent in testing between samples.

XLQD4Z (X) - Data for both samples are high. Possible Systematic Error.

SAMPLE P41	SAMPLE P42
72.95 ksi	72.62 ksi



		Sample P41			Sample		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
28DWJ6	M	47.30	-1.36	-0.49	No Data Reported		
2AG4PX		46.94	-1.72	-0.62	47.42	-1.08	-0.43
47A3N4		45.00	-3.66	-1.32	45.80	-2.70	-1.07
4KBMCM		50.20	1.54	0.56	51.60	3.10	1.22
4XHMZZ		50.25	1.59	0.57	50.11	1.61	0.63
66Y9UP		48.53	-0.13	-0.05	50.75	2.25	0.89
6BZRMM		50.28	1.62	0.58	50.25	1.75	0.69
6TKHLL		49.22	0.57	0.20	48.70	0.20	0.08
72QPYZ		45.40	-3.26	-1.17	45.20	-3.30	-1.30
7HXWZN		49.07	0.41	0.15	49.02	0.52	0.21
7TWGFV		48.94	0.28	0.10	48.78	0.28	0.11
8J9U9Y		53.50	4.84	1.74	50.50	2.00	0.79
924TRJ		46.30	-2.36	-0.85	46.50	-2.00	-0.79
926QY9		47.70	-0.96	-0.34	48.20	-0.30	-0.12
94ADFJ		54.23	5.57	2.01	54.85	6.35	2.51
9QLDHP		49.29	0.64	0.23	45.98	-2.52	-0.99
A6LHKU	X	37.90	-10.76	-3.87	38.30	-10.20	-4.03
BDRRFQ		52.18	3.52	1.27	50.32	1.81	0.72
BHMJJG		49.20	0.54	0.20	48.60	0.10	0.04
BK7KKV		47.50	-1.16	-0.42	48.50	0.00	0.00
BPJVMK		46.90	-1.76	-0.63	45.30	-3.20	-1.26
CTWM2X		53.00	4.34	1.56	50.20	1.70	0.67
D4FCK3		54.70	6.04	2.17	53.90	5.40	2.13
DXBBLU		49.70	1.04	0.38	49.40	0.90	0.35
EGEP6R		45.50	-3.16	-1.14	45.40	-3.10	-1.22
EP76WG		44.67	-3.98	-1.43	43.11	-5.40	-2.13
EYXLLL		50.18	1.53	0.55	49.02	0.52	0.21
FDC2A3		46.40	-2.26	-0.81	50.00	1.50	0.59
FDWPPC	*	53.95	5.30	1.91	49.02	0.52	0.21
FF38QT		50.00	1.34	0.48	51.00	2.50	0.99
FRDMTR		45.10	-3.56	-1.28	46.50	-2.00	-0.79
FYVB8U		49.20	0.54	0.20	50.50	2.00	0.79
FZM8U3		47.30	-1.36	-0.49	48.46	-0.04	-0.02
G7B67W		48.85	0.19	0.07	48.25	-0.25	-0.10
G9YJU8		43.40	-5.26	-1.89	44.50	-4.00	-1.58
GPPLBB	X	52.20	3.54	1.28	56.10	7.60	3.00
GVD4R8		48.10	-0.56	-0.20	46.40	-2.10	-0.83
GXXUJJ		52.83	4.17	1.50	54.38	5.88	2.32
HBVTVY		49.44	0.79	0.28	50.53	2.03	0.80
HGNLDU		50.70	2.04	0.74	49.00	0.50	0.20
HK8TPA		49.82	1.17	0.42	50.79	2.29	0.90
J4WGKN		53.40	4.74	1.71	54.00	5.50	2.17
JEBKHL		46.10	-2.56	-0.92	47.60	-0.90	-0.36
K7GX4U		44.80	-3.85	-1.39	48.25	-0.25	-0.10
K7W2XL		51.30	2.64	0.95	52.22	3.72	1.47
KAGYEP		49.40	0.74	0.27	47.70	-0.80	-0.32
LMYNRF		47.18	-1.48	-0.53	47.79	-0.71	-0.28

		Sample P41			Sample P42		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
LPBN82		47.00	-1.66	-0.60	47.30	-1.20	-0.47
M7M2PG		53.00	4.34	1.56	51.70	3.20	1.26
N2FL7L		49.30	0.64	0.23	49.50	1.00	0.39
NNP2FW		46.10	-2.56	-0.92	47.80	-0.70	-0.28
NPZBJA		46.98	-1.68	-0.60	46.95	-1.55	-0.61
NPZZCQ		44.34	-4.32	-1.55	44.63	-3.87	-1.53
P4ZY4U		47.19	-1.47	-0.53	44.45	-4.05	-1.60
P8UYEJ		49.60	0.94	0.34	52.10	3.60	1.42
PN4EA7		45.25	-3.40	-1.23	45.11	-3.39	-1.34
PWD9DT		50.04	1.38	0.50	47.43	-1.07	-0.42
QF9YDT		47.80	-0.86	-0.31	48.10	-0.40	-0.16
QHA8DW		48.50	-0.16	-0.06	49.60	1.10	0.43
QLCFV9		47.76	-0.90	-0.32	48.54	0.04	0.02
QNHZJ9		44.52	-4.14	-1.49	44.71	-3.80	-1.50
QR47BW		47.10	-1.56	-0.56	46.50	-2.00	-0.79
RW6YKJ		51.40	2.74	0.99	49.10	0.60	0.24
T2Y48V		46.99	-1.66	-0.60	45.98	-2.52	-1.00
TAQLGX		49.58	0.92	0.33	50.57	2.07	0.82
TN9BFZ		51.08	2.42	0.87	50.13	1.63	0.64
TT6ZYR		49.30	0.64	0.23	46.90	-1.60	-0.63
TWKPZG		51.50	2.84	1.02	51.00	2.50	0.99
U2TDDH		47.72	-0.94	-0.34	49.02	0.52	0.21
UA8NF6		45.44	-3.22	-1.16	45.17	-3.34	-1.32
UAKNND		49.48	0.83	0.30	47.49	-1.01	-0.40
ULJFFD		53.10	4.44	1.60	50.90	2.40	0.95
V33T7A		46.53	-2.13	-0.77	49.57	1.07	0.42
VGHVNX		53.50	4.85	1.74	50.55	2.04	0.81
VXC6PH		52.10	3.44	1.24	50.87	2.36	0.93
WLQF9P		45.40	-3.26	-1.17	43.30	-5.20	-2.05
WVH2AG		46.85	-1.81	-0.65	46.25	-2.25	-0.89
X23GDE		47.72	-0.94	-0.34	50.47	1.97	0.78
XLQD4Z		53.66	5.00	1.80	51.02	2.52	0.99
XQZ2QU		49.96	1.30	0.47	50.06	1.56	0.61
Y6XY4X		47.70	-0.96	-0.35	46.77	-1.73	-0.68
YKVLJJ	X	48.60	-0.06	-0.02	41.60	-6.90	-2.72
YQ32CF		47.89	-0.77	-0.28	47.75	-0.75	-0.30
YV87KR		44.40	-4.26	-1.53	46.37	-2.13	-0.84
Z6AQE8		45.30	-3.36	-1.21	45.00	-3.50	-1.38
Z78WZ8		43.94	-4.71	-1.70	46.18	-2.32	-0.91
ZT4QTF	X	50.50	1.84	0.66	55.80	7.30	2.88
ZV8944		47.87	-0.79	-0.28	46.50	-2.00	-0.79

Summary Statistics

	Sample P41		Sample P42	
Grand Means	48.66	ksi	48.50	ksi
Stnd Dev Btwn Labs	2.78	ksi	2.53	ksi

Samples P41, P42 : AISI 1018 (E), AISI 1018 (F)

Statistics based on 83 of 88 reporting participants

Comments on Assigned Data Flags for Test #141

28DWJ6 (M) - Participant did not submit data for sample P42.

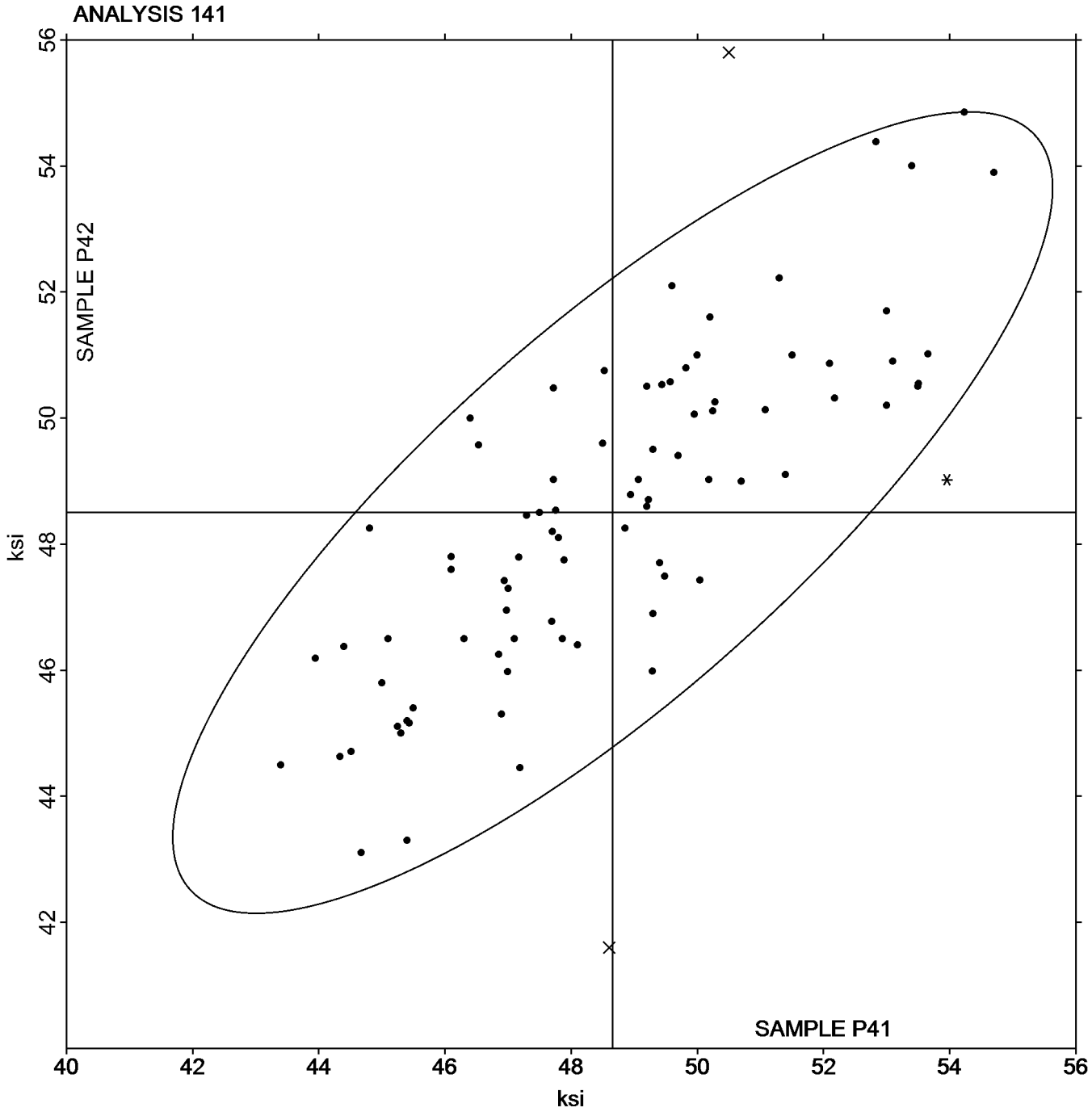
A6LHKU (X) - Data for both samples are low. Possible Systematic Error.

GPPLBB (X) - Data for sample P42 are high.

YKVLJJ (X) - Inconsistent in testing between samples.

ZT4QTF (X) - Data for sample P42 are high.

SAMPLE P41	SAMPLE P42
48.66 ksi	48.50 ksi



		Sample P41			Sample P42		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
28DWJ6	X	19.00	-14.97	-7.24	35.00	1.25	0.58
2AG4PX		36.50	2.53	1.22	36.50	2.75	1.27
47A3N4		35.00	1.03	0.50	34.30	0.55	0.25
4KBMCM		33.10	-0.87	-0.42	32.80	-0.95	-0.44
4XHMZZ		33.50	-0.47	-0.23	33.50	-0.25	-0.12
66Y9UP		34.80	0.83	0.40	35.20	1.45	0.67
6BZRMM		33.00	-0.97	-0.47	33.00	-0.75	-0.35
6TKHLL		33.00	-0.97	-0.47	33.00	-0.75	-0.35
72QPYZ		35.77	1.80	0.87	35.53	1.78	0.82
76W3NF		34.00	0.03	0.01	32.00	-1.75	-0.81
7HXWZN		33.40	-0.57	-0.28	33.50	-0.25	-0.12
7TWGFV		31.40	-2.57	-1.24	32.30	-1.45	-0.67
8J9U9Y		33.30	-0.67	-0.33	32.60	-1.15	-0.53
924TRJ		30.00	-3.97	-1.92	29.10	-4.65	-2.16
926QY9		33.40	-0.57	-0.28	31.20	-2.55	-1.18
94ADFJ		35.10	1.13	0.54	33.30	-0.45	-0.21
9QLDHP	*	31.00	-2.97	-1.44	33.00	-0.75	-0.35
A6LHKU		30.80	-3.17	-1.53	30.20	-3.55	-1.65
BDRRFQ		33.40	-0.57	-0.28	33.00	-0.75	-0.35
BHMJJG		33.00	-0.97	-0.47	34.00	0.25	0.12
BK7KKV		39.10	5.13	2.48	38.60	4.85	2.25
BPJVMK		36.40	2.43	1.17	37.00	3.25	1.51
CTWM2X		30.80	-3.17	-1.53	30.00	-3.75	-1.74
D4FCK3		31.50	-2.47	-1.20	31.00	-2.75	-1.28
DXBBLU		35.00	1.03	0.50	35.50	1.75	0.81
EGEP6R		36.80	2.83	1.37	35.78	2.03	0.94
EP76WG		35.10	1.13	0.54	34.90	1.15	0.53
EYXLLL		32.10	-1.87	-0.91	32.90	-0.85	-0.39
FDC2A3	X	27.00	-6.97	-3.37	27.40	-6.35	-2.94
FDWPPC	*	30.00	-3.97	-1.92	28.00	-5.75	-2.67
FF38QT		31.80	-2.17	-1.05	31.70	-2.05	-0.95
FRDMTR		36.34	2.37	1.14	35.89	2.14	0.99
FYVB8U		33.00	-0.97	-0.47	33.50	-0.25	-0.12
FZM8U3	X	15.70	-18.27	-8.83	15.50	-18.25	-8.46
G7B67W		31.95	-2.02	-0.98	31.35	-2.40	-1.11
G9YJU8		33.10	-0.87	-0.42	33.40	-0.35	-0.16
GPPLBB		36.40	2.43	1.17	36.20	2.45	1.14
GVD4R8		32.00	-1.97	-0.95	32.50	-1.25	-0.58
GXXUJJ		33.40	-0.57	-0.28	34.40	0.65	0.30
HBVTVY		34.00	0.03	0.01	33.80	0.05	0.02
HGNLDU		35.80	1.83	0.88	35.40	1.65	0.76
HK8TPA		33.00	-0.97	-0.47	33.50	-0.25	-0.12
J4WGKN		34.00	0.03	0.01	33.00	-0.75	-0.35
JEBKHL		38.00	4.03	1.95	38.10	4.35	2.02
K7GX4U		34.00	0.03	0.01	33.00	-0.75	-0.35
K7W2XL		37.00	3.03	1.46	36.00	2.25	1.04
KAGYEP		32.00	-1.97	-0.95	32.00	-1.75	-0.81

		Sample P41			Sample P42		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
LMYNRF		33.20	-0.77	-0.37	32.40	-1.35	-0.63
LPBN82		32.90	-1.07	-0.52	31.40	-2.35	-1.09
M7M2PG	X	34.00	0.03	0.01	37.00	3.25	1.51
N2FL7L		36.00	2.03	0.98	36.00	2.25	1.04
NNP2FW		33.40	-0.57	-0.28	33.30	-0.45	-0.21
NPZBJA		35.60	1.63	0.79	36.00	2.25	1.04
NPZZCQ		36.79	2.82	1.36	38.22	4.47	2.07
P4ZY4U		35.70	1.73	0.83	35.50	1.75	0.81
P8UYEJ		34.00	0.03	0.01	34.00	0.25	0.12
PN4EA7		34.00	0.03	0.01	35.80	2.05	0.95
PWD9DT		36.84	2.87	1.38	34.95	1.20	0.56
QF9YDT		31.00	-2.97	-1.44	30.30	-3.45	-1.60
QHA8DW		35.40	1.43	0.69	35.80	2.05	0.95
QLCFV9		31.60	-2.37	-1.15	31.40	-2.35	-1.09
QNHZJ9		39.00	5.03	2.43	38.00	4.25	1.97
QR47BW		35.90	1.93	0.93	34.00	0.25	0.12
RW6YKJ		34.40	0.43	0.21	34.20	0.45	0.21
T2Y48V		30.60	-3.37	-1.63	30.90	-2.85	-1.32
TAQLGX		33.00	-0.97	-0.47	33.50	-0.25	-0.12
TN9BFZ		33.00	-0.97	-0.47	33.00	-0.75	-0.35
TT6ZYR		36.00	2.03	0.98	36.20	2.45	1.14
TWKPZG		35.00	1.03	0.50	34.00	0.25	0.12
U2TDDH		32.40	-1.57	-0.76	31.70	-2.05	-0.95
UA8NF6		35.50	1.53	0.74	34.50	0.75	0.35
UAKNND		33.50	-0.47	-0.23	33.50	-0.25	-0.12
ULJFFD		32.50	-1.47	-0.71	31.50	-2.25	-1.04
V33T7A		34.60	0.63	0.30	32.90	-0.85	-0.39
VGHVNX		34.80	0.83	0.40	34.30	0.55	0.25
VXC6PH		35.50	1.53	0.74	34.60	0.85	0.39
WLQF9P	X	41.90	7.93	3.83	38.10	4.35	2.02
WVH2AG		32.00	-1.97	-0.95	33.00	-0.75	-0.35
X23GDE		29.60	-4.37	-2.11	29.20	-4.55	-2.11
XLQD4Z		36.69	2.72	1.31	37.54	3.79	1.76
XQZ2QU		33.00	-0.97	-0.47	33.50	-0.25	-0.12
Y6XY4X		32.10	-1.87	-0.91	31.85	-1.90	-0.88
YKVLJJ		31.30	-2.67	-1.29	32.90	-0.85	-0.39
YQ32CF		36.00	2.03	0.98	37.00	3.25	1.51
YV87KR		36.00	2.03	0.98	34.00	0.25	0.12
Z6AQE8		35.96	1.99	0.96	36.09	2.34	1.08
Z78WZ8		34.70	0.73	0.35	34.70	0.95	0.44
ZT4QTF		33.50	-0.47	-0.23	33.50	-0.25	-0.12
ZV8944		34.82	0.85	0.41	34.48	0.73	0.34

Summary Statistics

	Sample P41		Sample P42	
Grand Means	33.97	Percent	33.75	Percent
Stnd Dev Btwn Labs	2.07	Percent	2.16	Percent

Samples P41, P42 : AISI 1018 (E), AISI 1018 (F)

Statistics based on 84 of 89 reporting participants

Comments on Assigned Data Flags for Test #142

28DWJ6 (X) - Data for sample P41 are low.

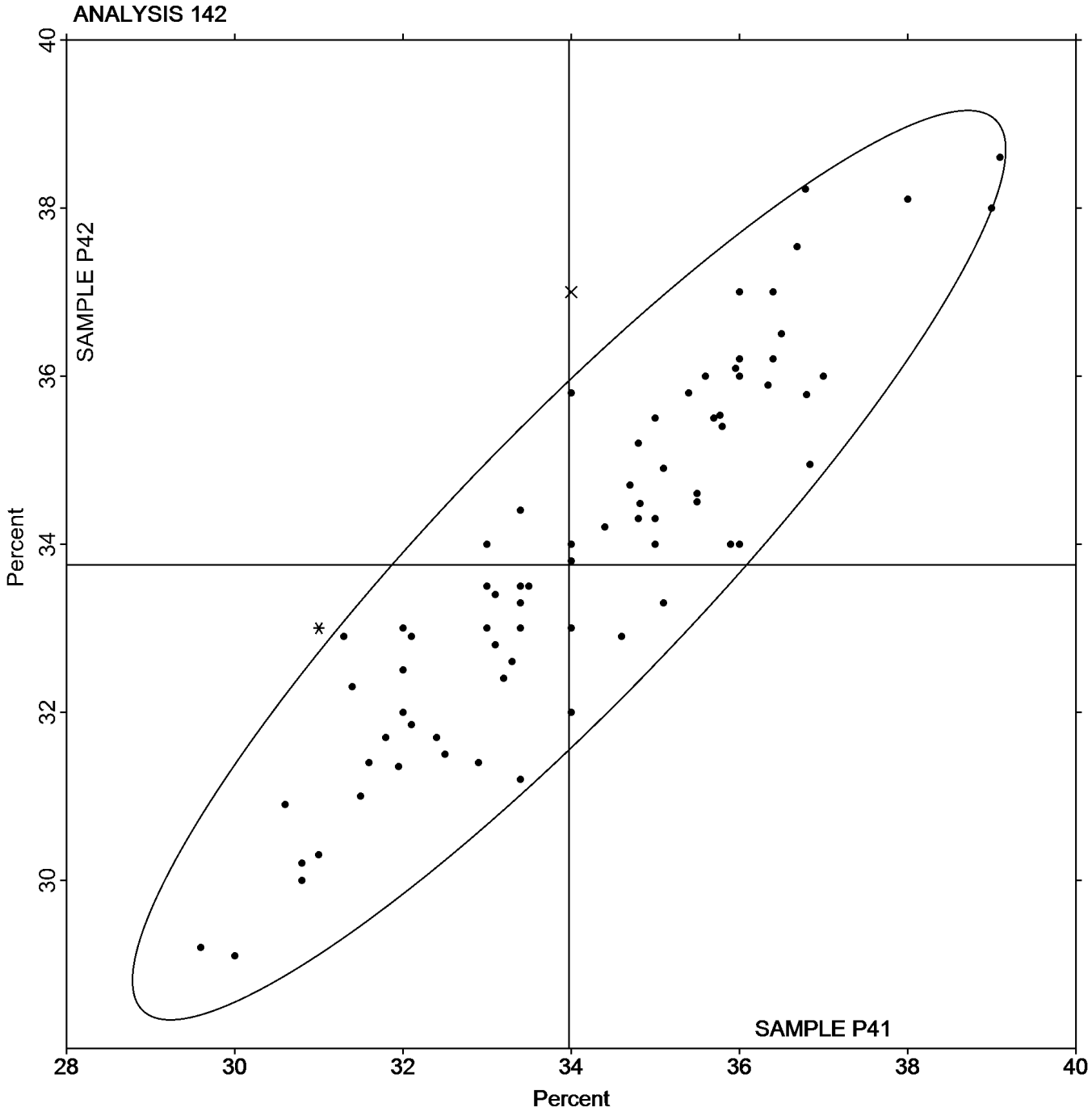
FDC2A3 (X) - Data for both samples are low. Possible Systematic Error.

FZM8U3 (X) - Data for both samples are low. Possible Systematic Error.

M7M2PG (X) - Inconsistent in testing between samples.

WLQF9P (X) - Data for sample P41 are high.

SAMPLE P41	SAMPLE P42
33.97 Percent	33.75 Percent



		Sample P41			Sample P42		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
28DWJ6		64.00	-1.64	-1.85	65.30	-0.19	-0.27
4KBMCM		66.60	0.96	1.08	66.10	0.61	0.90
4XHMZZ		65.00	-0.64	-0.72	64.90	-0.59	-0.86
66Y9UP		66.70	1.06	1.19	66.70	1.21	1.78
6BZRMM		65.80	0.16	0.18	65.40	-0.09	-0.12
6TKHLL		65.40	-0.24	-0.27	65.40	-0.09	-0.12
72QPYZ		66.00	0.36	0.40	66.00	0.51	0.75
76W3NF		67.00	1.36	1.53	66.00	0.51	0.75
7HXWZN		65.00	-0.64	-0.72	65.50	0.01	0.02
7TWGFV		66.08	0.44	0.49	65.67	0.18	0.27
8J9U9Y		65.50	-0.14	-0.16	65.10	-0.39	-0.56
924TRJ		67.00	1.36	1.53	66.00	0.51	0.75
926QY9		65.80	0.16	0.18	65.50	0.01	0.02
94ADFJ		66.00	0.36	0.40	65.50	0.01	0.02
9QLDHP	X	67.00	1.36	1.53	69.00	3.51	5.14
A6LHKU		66.00	0.36	0.40	66.20	0.71	1.05
BDRRFQ		64.50	-1.14	-1.28	64.60	-0.89	-1.30
BHMJJG	X	61.70	-3.94	-4.43	63.30	-2.19	-3.20
BK7KKV	X	65.50	-0.14	-0.16	68.70	3.21	4.71
BPJVMK	*	65.10	-0.54	-0.61	66.80	1.31	1.92
CTWM2X		65.40	-0.24	-0.27	66.30	0.81	1.19
D4FCK3		65.30	-0.34	-0.38	64.60	-0.89	-1.30
DXBBLU		66.40	0.76	0.85	65.50	0.01	0.02
EGEP6R		65.00	-0.64	-0.72	66.00	0.51	0.75
EP76WG	X	42.50	-23.14	-26.03	42.30	-23.19	-33.94
EYXLLL	X	62.60	-3.04	-3.42	62.80	-2.69	-3.93
FDC2A3		65.50	-0.14	-0.16	64.50	-0.99	-1.44
FDWPPC		64.98	-0.66	-0.74	66.12	0.63	0.93
FF38QT		65.30	-0.34	-0.38	65.40	-0.09	-0.12
FRDMTR		66.00	0.36	0.40	66.00	0.51	0.75
FYVB8U		67.10	1.46	1.64	65.40	-0.09	-0.12
FZM8U3		66.80	1.16	1.30	65.60	0.11	0.17
G7B67W		65.74	0.10	0.11	65.23	-0.26	-0.37
G9YJU8		65.70	0.06	0.07	65.30	-0.19	-0.27
GPPLBB		65.60	-0.04	-0.05	65.80	0.31	0.46
GVD4R8		64.60	-1.04	-1.17	64.10	-1.39	-2.03
GXXUJJ	X	64.50	-1.14	-1.28	55.00	-10.49	-15.35
HBVTVY		65.55	-0.09	-0.10	65.69	0.20	0.30
HGNLDU		66.00	0.36	0.40	64.20	-1.29	-1.88
HK8TPA		66.30	0.66	0.74	65.80	0.31	0.46
J4WGKN		64.00	-1.64	-1.85	65.00	-0.49	-0.71
JEBKHL	*	63.70	-1.94	-2.18	64.00	-1.49	-2.17
K7GX4U		65.70	0.06	0.07	65.50	0.01	0.02
K7W2XL		66.00	0.36	0.40	66.00	0.51	0.75
KAGYEP		66.00	0.36	0.40	66.00	0.51	0.75
LMYNRF	X	61.00	-4.64	-5.22	60.80	-4.69	-6.86
LPBN82		65.66	0.02	0.02	65.32	-0.17	-0.24

		Sample P41			Sample P42		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
M7M2PG	*	63.70	-1.94	-2.18	65.60	0.11	0.17
N2FL7L		65.70	0.06	0.07	65.20	-0.29	-0.42
NNP2FW		66.70	1.06	1.19	66.00	0.51	0.75
NPZBJA		67.00	1.36	1.53	66.00	0.51	0.75
NPZZCQ		66.79	1.15	1.29	65.47	-0.02	-0.02
P4ZY4U		65.00	-0.64	-0.72	65.00	-0.49	-0.71
P8UYEJ		66.70	1.06	1.19	64.70	-0.79	-1.15
PN4EA7		65.00	-0.64	-0.72	66.00	0.51	0.75
PWD9DT		67.50	1.86	2.09	66.12	0.63	0.93
QF9YDT		65.80	0.16	0.18	65.30	-0.19	-0.27
QHA8DW		66.00	0.36	0.40	65.90	0.41	0.61
QLCFV9	*	65.30	-0.34	-0.38	63.80	-1.69	-2.47
QNHZJ9	X	69.00	3.36	3.78	69.00	3.51	5.14
QR47BW		65.50	-0.14	-0.16	65.10	-0.39	-0.56
RW6YKJ		66.40	0.76	0.85	65.90	0.41	0.61
T2Y48V		64.20	-1.44	-1.62	64.80	-0.69	-1.00
TAQLGX		65.80	0.16	0.18	65.70	0.21	0.31
TN9BFZ		65.80	0.16	0.18	65.90	0.41	0.61
TT6ZYR		67.00	1.36	1.53	66.70	1.21	1.78
TWKPZG		65.60	-0.04	-0.05	66.20	0.71	1.05
U2TDDH		65.30	-0.34	-0.38	64.80	-0.69	-1.00
UA8NF6		65.99	0.35	0.39	66.49	1.00	1.47
UAKNND	*	64.70	-0.94	-1.06	63.50	-1.99	-2.91
ULJFFD		65.90	0.26	0.29	65.60	0.11	0.17
V33T7A		66.30	0.66	0.74	65.90	0.41	0.61
VGHVNX		65.80	0.16	0.18	65.90	0.41	0.61
VXC6PH		65.80	0.16	0.18	66.20	0.71	1.05
WLQF9P		66.20	0.56	0.63	65.00	-0.49	-0.71
WVH2AG		65.00	-0.64	-0.72	65.00	-0.49	-0.71
X23GDE		66.20	0.56	0.63	65.70	0.21	0.31
XLQD4Z		66.57	0.93	1.05	66.73	1.24	1.82
XQZ2QU		65.80	0.16	0.18	65.70	0.21	0.31
Y6XY4X		65.97	0.33	0.37	65.19	-0.30	-0.43
YKVLJJ		64.40	-1.24	-1.40	65.30	-0.19	-0.27
YQ32CF		64.00	-1.64	-1.85	65.60	0.11	0.17
YV87KR		65.27	-0.37	-0.42	65.38	-0.11	-0.15
Z6AQE8		66.00	0.36	0.40	66.00	0.51	0.75
Z78WZ8		64.00	-1.64	-1.85	64.00	-1.49	-2.17
ZT4QTF		66.10	0.46	0.52	65.20	-0.29	-0.42
ZV8944	*	63.00	-2.64	-2.97	64.72	-0.77	-1.12

Summary Statistics

	Sample P41		Sample P42	
Grand Means	65.64	Percent	65.49	Percent
Stnd Dev Btwn Labs	0.89	Percent	0.68	Percent

Samples P41, P42 : AISI 1018 (E), AISI 1018 (F)

Statistics based on 79 of 87 reporting participants

Comments on Assigned Data Flags for Test #143

9QLDHP (X) - Data for sample P42 are high.

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

BK7KKV (X) - Data for sample P42 are high.

EP76WG (X) - Data for both samples are low.

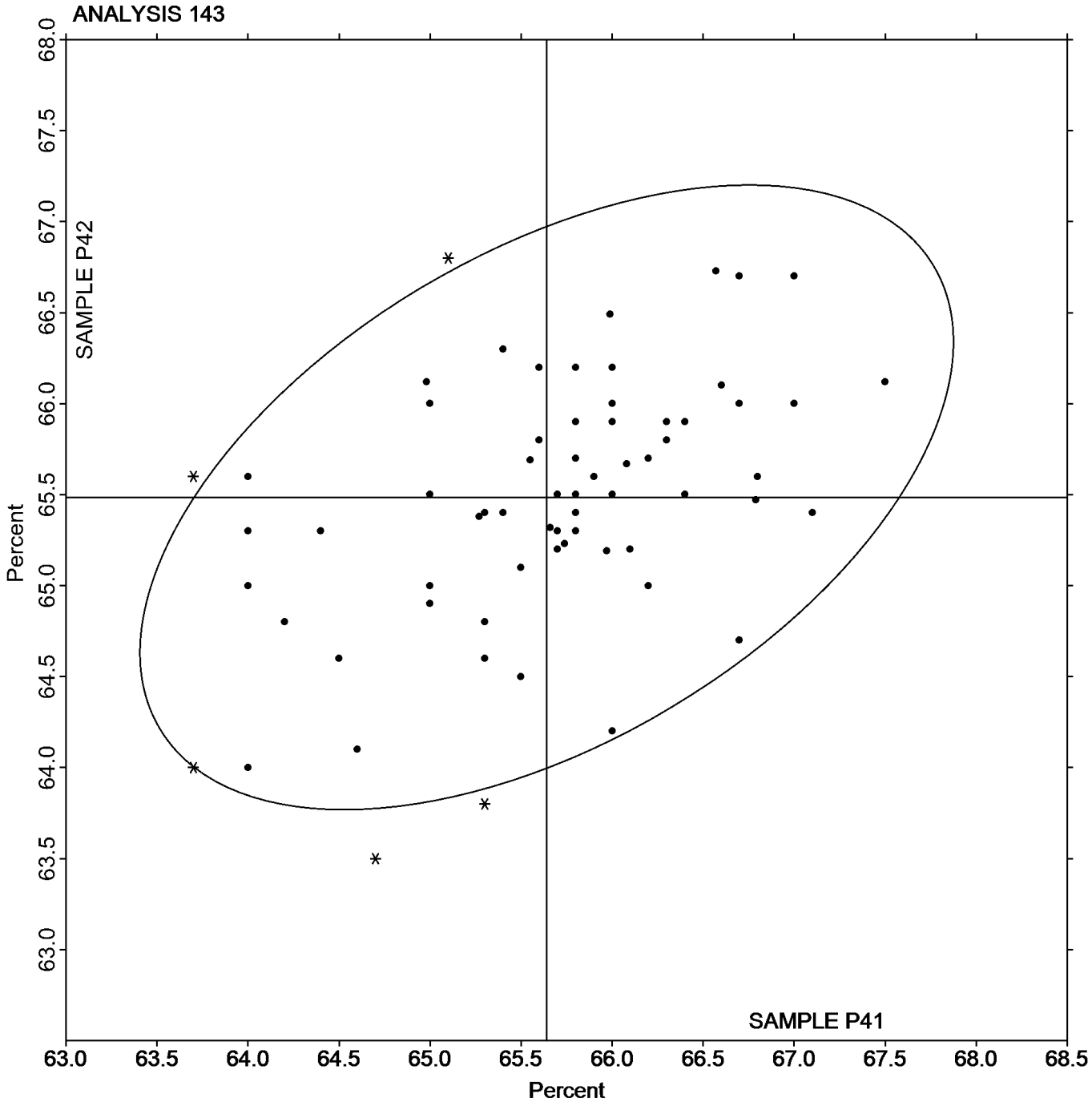
EYXLLL (X) - Data for both samples are low.

GXXUJJ (X) - Data for sample P42 are low.

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

QNHZJ9 (X) - Data for both samples are high.

SAMPLE P41	SAMPLE P42
65.64 Percent	65.49 Percent



		Sample L41			Sample L42			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
28DWJ6	X	0.2207	0.0256	3.72	0.2070	0.0084	1.41	OE
2N4ULZ		0.1967	0.0016	0.23	0.1993	0.0007	0.12	OE
326AAV		0.1957	0.0007	0.10	0.1978	-0.0008	-0.13	OE
398UJY		0.2077	0.0126	1.84	0.2081	0.0095	1.59	OE
39KFX8	X	0.2155	0.0205	2.98	0.2197	0.0211	3.53	OE
39PVCT	X	0.1933	-0.0017	-0.25	0.1970	-0.0016	-0.27	CI
3BCCNL		0.1936	-0.0015	-0.22	0.1935	-0.0051	-0.86	DR
3BE3WP		0.1901	-0.0050	-0.72	0.1953	-0.0033	-0.55	OE
3U3PWJ	X	0.1718	-0.0233	-3.39	0.1859	-0.0127	-2.12	OE
3WBX4H		0.2010	0.0059	0.86	0.2024	0.0038	0.63	OE
3WN2LV	*	0.1843	-0.0107	-1.56	0.1990	0.0004	0.07	DC
4NAFDR		0.1917	-0.0034	-0.50	0.1960	-0.0026	-0.43	OE
66Y9UP		0.1920	-0.0031	-0.45	0.1973	-0.0013	-0.21	CI
6DUBYL		0.1900	-0.0051	-0.74	0.1913	-0.0073	-1.21	OE
6NNU6E	*	0.1973	0.0023	0.33	0.2097	0.0111	1.85	XX
6XZQAL	*	0.2037	0.0086	1.25	0.1973	-0.0013	-0.21	OE
6ZH86B		0.2003	0.0053	0.77	0.2030	0.0044	0.74	XX
7GNU8X		0.1833	-0.0117	-1.71	0.1900	-0.0086	-1.44	OE
7QAXDC	X	0.2323	0.0372	5.42	0.2256	0.0270	4.51	OE
7UC9KT	*	0.1777	-0.0174	-2.53	0.1800	-0.0186	-3.11	OE
8EDLTQ		0.1860	-0.0091	-1.32	0.1940	-0.0046	-0.77	CI
8M4UZF		0.1909	-0.0042	-0.61	0.1949	-0.0037	-0.62	CI
8WEWN2		0.1879	-0.0072	-1.05	0.1928	-0.0058	-0.97	OE
8WWFHU		0.1987	0.0037	0.53	0.2003	0.0017	0.29	OE
8ZKD67		0.1993	0.0043	0.62	0.2010	0.0024	0.40	OE
A6LEVQ		0.1930	-0.0021	-0.30	0.1957	-0.0029	-0.49	OE
ACJ6G2		0.1830	-0.0121	-1.76	0.1918	-0.0068	-1.13	CI
AH7WNU		0.1987	0.0036	0.52	0.2007	0.0021	0.35	OE
ANU8QK		0.2007	0.0057	0.82	0.2039	0.0053	0.88	OE
BAQVJ6		0.1946	-0.0005	-0.07	0.1931	-0.0055	-0.92	OE
BDRRFQ		0.1913	-0.0037	-0.54	0.1987	0.0001	0.01	CI
BEHV37		0.1920	-0.0031	-0.45	0.1930	-0.0056	-0.93	OE
BHMJJG		0.1977	0.0026	0.38	0.1940	-0.0046	-0.77	OE
BPJVMK		0.1873	-0.0077	-1.13	0.1887	-0.0099	-1.66	GD
BZQTRU		0.1870	-0.0081	-1.17	0.1877	-0.0109	-1.83	OE
C7PEXH		0.1950	-0.0001	-0.01	0.1969	-0.0017	-0.28	OE
CRTNCX		0.1967	0.0016	0.23	0.2027	0.0041	0.68	OE
CTZ3GJ		0.1930	-0.0021	-0.30	0.1930	-0.0056	-0.93	OE
CVNJTC		0.1937	-0.0014	-0.20	0.1937	-0.0049	-0.83	OE
D4FCK3		0.1943	-0.0007	-0.11	0.2013	0.0027	0.46	CI
D9PFMX		0.1960	0.0009	0.14	0.2047	0.0061	1.02	OE
D9TXTA		0.1930	-0.0021	-0.30	0.1980	-0.0006	-0.10	XX
DMAZ67		0.1887	-0.0064	-0.93	0.1907	-0.0079	-1.33	XX
DTWXGZ		0.1850	-0.0101	-1.47	0.1910	-0.0076	-1.27	OE
E328NQ		0.1940	-0.0011	-0.16	0.1967	-0.0019	-0.32	OE
EK23BP		0.2033	0.0083	1.20	0.2100	0.0114	1.91	OE
EYFCWQ		0.1867	-0.0084	-1.22	0.1940	-0.0046	-0.77	OE

		Sample L41			Sample L42			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
FDWPPC		0.1911	-0.0040	-0.58	0.1932	-0.0054	-0.90	OE
FLMZQE		0.2100	0.0149	2.17	0.2123	0.0137	2.30	OE
FZM8U3		0.1990	0.0039	0.57	0.2040	0.0054	0.91	OE
GEZ2KJ		0.2090	0.0139	2.03	0.2047	0.0061	1.02	OE
GYUH9L	X	0.2211	0.0261	3.79	0.2208	0.0222	3.72	OE
HTVBWB		0.2053	0.0103	1.49	0.2013	0.0027	0.46	OE
J4WGKN		0.1847	-0.0104	-1.51	0.1907	-0.0079	-1.33	OE
JHF6UL		0.1980	0.0029	0.43	0.1993	0.0007	0.12	OE
JUAZVG		0.1937	-0.0014	-0.20	0.1997	0.0011	0.18	CI
JZCJ6K		0.1987	0.0036	0.52	0.2020	0.0034	0.57	OE
JZGPRA		0.2016	0.0065	0.94	0.2010	0.0024	0.40	OE
KG2666		0.1942	-0.0008	-0.12	0.2014	0.0028	0.46	OE
KML6GB		0.2047	0.0096	1.40	0.2087	0.0101	1.69	OE
KUMAG8		0.2037	0.0086	1.25	0.2063	0.0077	1.30	GD
L22FT6		0.1900	-0.0051	-0.74	0.1937	-0.0049	-0.82	CO
LBQDBX		0.1890	-0.0061	-0.88	0.1960	-0.0026	-0.43	CO
LJYXKL		0.2028	0.0078	1.13	0.2104	0.0118	1.98	OE
LKBJ82		0.1920	-0.0031	-0.45	0.1947	-0.0039	-0.66	OE
MVTCJH		0.2017	0.0066	0.96	0.2050	0.0064	1.07	CI
N6VR99		0.1903	-0.0047	-0.69	0.1920	-0.0066	-1.10	OE
NKJ3VB	X	0.1981	0.0030	0.44	0.2172	0.0186	3.12	CO
NMEW4T		0.1955	0.0005	0.07	0.1961	-0.0025	-0.41	CI
NNP2FW		0.2030	0.0079	1.15	0.2013	0.0027	0.46	DR
NQVL4W		0.2027	0.0076	1.11	0.2050	0.0064	1.07	OE
NWH9Y3		0.2010	0.0059	0.86	0.2027	0.0041	0.68	OE
P6P7KK		0.1970	0.0019	0.28	0.1980	-0.0006	-0.10	GD
P8UYEJ		0.1933	-0.0018	-0.26	0.1961	-0.0025	-0.42	CO
P9MR8G		0.2050	0.0099	1.44	0.2070	0.0084	1.41	OE
PAKWTG		0.1870	-0.0081	-1.17	0.1953	-0.0033	-0.54	GD
PKJX2E	X	0.2000	0.0049	0.72	0.2553	0.0567	9.49	OE
PWD9DT		0.1923	-0.0027	-0.40	0.1990	0.0004	0.07	CI
QCMDK6		0.1910	-0.0041	-0.59	0.1973	-0.0013	-0.21	CI
QLCFV9	X	0.2447	0.0496	7.22	0.2553	0.0567	9.49	OE
QWVKUC		0.2056	0.0106	1.54	0.2065	0.0079	1.33	OE
QX6MHW		0.1880	-0.0071	-1.03	0.1963	-0.0023	-0.38	CI
RBQENH	*	0.2103	0.0153	2.22	0.2057	0.0071	1.18	GD
RHRHRV		0.1966	0.0015	0.22	0.2005	0.0019	0.31	OE
RZC6FR	X	0.1550	-0.0401	-5.83	0.1524	-0.0462	-7.73	OE
T2B6M3		0.1997	0.0046	0.67	0.2027	0.0041	0.68	OE
TQGLBH		0.1980	0.0029	0.43	0.2003	0.0017	0.29	OE
UHZKCK		0.2063	0.0113	1.64	0.2107	0.0121	2.02	OE
ULJFFD		0.2033	0.0083	1.20	0.2007	0.0021	0.35	OE
UWJW39		0.1977	0.0026	0.38	0.2033	0.0047	0.79	GD
V68WMX	X	0.2540	0.0589	8.58	0.2460	0.0474	7.93	OE
VNMGTV		0.2037	0.0086	1.25	0.2033	0.0047	0.79	OE
VQQ82V		0.1897	-0.0054	-0.79	0.1980	-0.0006	-0.10	CI
W3FTFP		0.1910	-0.0041	-0.59	0.1983	-0.0003	-0.04	CI

Fasteners and Metals Interlaboratory Testing Program

Analysis 170

Carbon & Low Alloy Steel, Element #1

CARBON (C)

WebCode	Data Flag	Sample L41 Lab Mean	Sample L41 Diff. from Grand Mean	Sample L41 CPV	Sample L42 Lab Mean	Sample L42 Diff. from Grand Mean	Sample L42 CPV	Method
WAHVQG		0.1953	0.0003	0.04	0.2007	0.0021	0.35	DR
WJ9CH7	X	0.2233	0.0283	4.11	0.1923	-0.0063	-1.05	OE
WQ3JZC		0.1813	-0.0137	-2.00	0.1927	-0.0059	-0.99	OE
WRFXNL		0.1857	-0.0094	-1.37	0.1937	-0.0049	-0.82	CO
WVH2AG		0.1886	-0.0065	-0.95	0.1930	-0.0056	-0.93	OE
X23GDE		0.1913	-0.0037	-0.54	0.1973	-0.0013	-0.21	CI
XCGHV6	X	0.2180	0.0229	3.34	0.2193	0.0207	3.47	OE
XGB6FZ	X	0.1757	-0.0194	-2.82	0.1910	-0.0076	-1.27	OE
XUD7YA		0.1953	0.0003	0.04	0.2050	0.0064	1.07	CI
XUFTH9	X	0.1813	-0.0137	-2.00	0.1920	-0.0066	-1.10	CO
XX388H		0.1970	0.0019	0.28	0.2010	0.0024	0.40	GD
Y6XY4X		0.1898	-0.0052	-0.76	0.1915	-0.0071	-1.19	AE
Y9ZB87		0.2045	0.0095	1.38	0.1951	-0.0035	-0.58	OE
YQ32CF	*	0.1850	-0.0101	-1.47	0.1847	-0.0139	-2.33	OE
YW68T4		0.2003	0.0052	0.75	0.2058	0.0072	1.21	OE
Z78WZ8		0.1911	-0.0039	-0.57	0.1966	-0.0020	-0.33	CI
ZV8944		0.1989	0.0039	0.56	0.1972	-0.0014	-0.23	DR
ZV897P		0.1977	0.0026	0.38	0.2020	0.0034	0.57	OE

Summary Statistics

	Sample L41		Sample L42	
Grand Means	0.1951	Percent	0.1986	Percent
Stnd Dev Btwn Labs	0.0069	Percent	0.0060	Percent

Samples L41, L42 : AISI 1018, A36

Statistics based on 96 of 112 reporting participants

Key to Method Codes Reported by Participants

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

Comments on Assigned Data Flags for Test #170

28DWJ6 (X) - Data for sample L41 are high.

39KFX8 (X) - Data for both samples are high. Possible Systematic Error.

39PVCT (X) - Data were submitted late. Results were consistent with the other laboratories.

3U3PWJ (X) - Data for sample L41 are low.

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

GYUH9L (X) - Data for both samples are high. Possible Systematic Error.

NKJ3VB (X) - Data for sample L42 are high. Inconsistent within the determinations of sample L42.

PKJX2E (X) - Data for sample L42 are high.

QLCFV9 (X) - Data for both samples are high. Possible Systematic Error.

RZC6FR (X) - Data for both samples are low. Possible Systematic Error.

V68WMX (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of sample L42.

WJ9CH7 (X) - Data for sample L41 are high. Inconsistent within the determinations of sample L42.

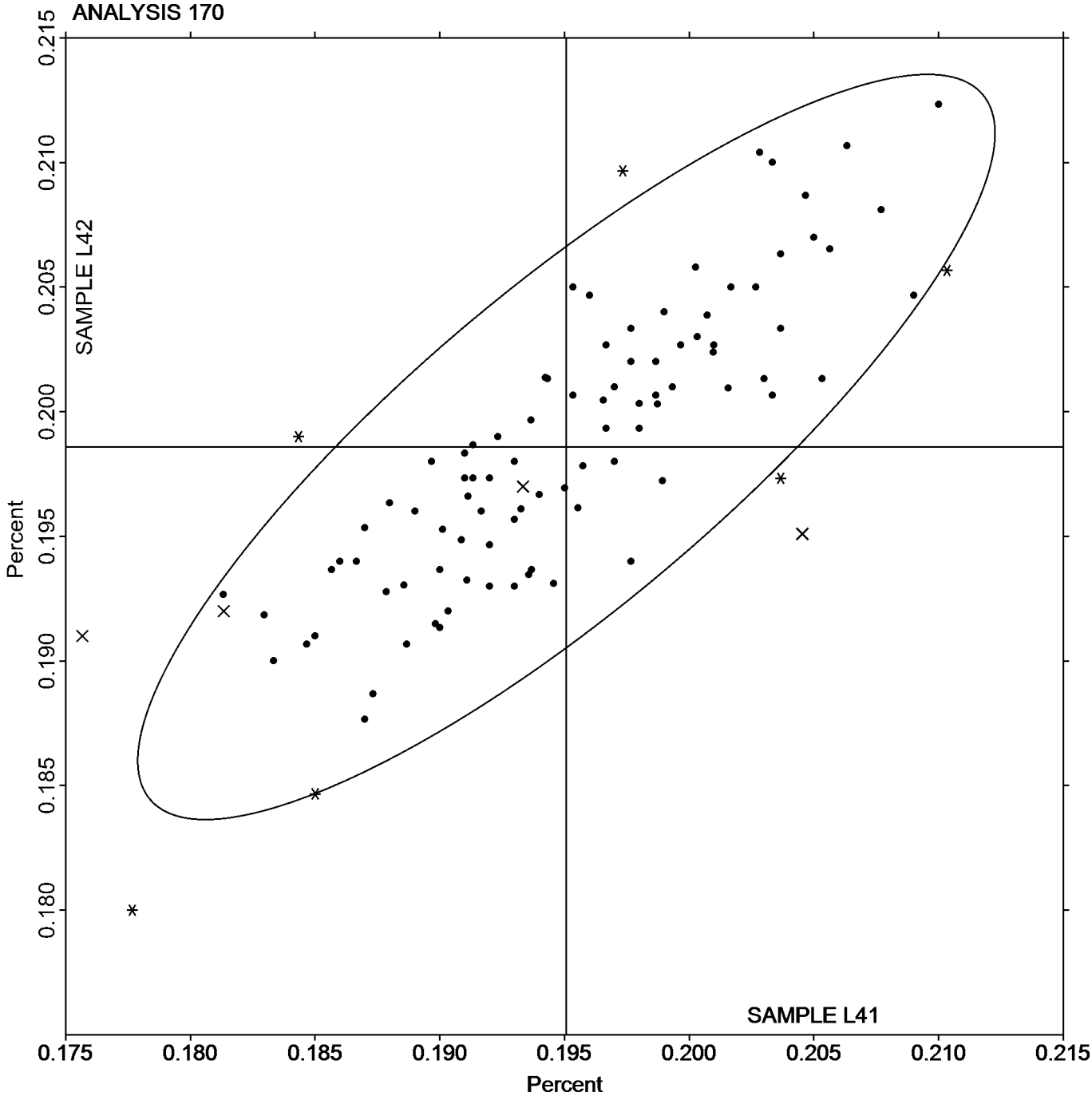
XCGHV6 (X) - Data for both samples are high. Possible Systematic Error.

XGB6FZ (X) - Data for sample L41 are low.

XUFTH9 (X) - Data were submitted late. Results were consistent with the other laboratories.

SAMPLE L41
0.1951 Percent

SAMPLE L42
0.1986 Percent



		Sample L41			Sample L42			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
28DWJ6	*	0.8290	0.0255	2.53	1.020	0.0205	1.38	OE
2AG4PX		0.7820	-0.0215	-2.12	0.9783	-0.0212	-1.43	OE
2N4ULZ		0.7900	-0.0135	-1.33	0.9733	-0.0262	-1.76	OE
326AAV	*	0.8069	0.0035	0.34	1.033	0.0330	2.22	OE
398UJY		0.8037	0.0003	0.03	0.9980	-0.0015	-0.10	OE
39KFX8		0.8034	-0.0001	-0.01	1.013	0.0139	0.94	OE
39PVCT	X	0.8033	-0.0001	-0.01	0.9887	-0.0109	-0.73	OE
3BCCNL		0.8051	0.0016	0.16	0.9917	-0.0078	-0.53	DR
3BE3WP		0.7915	-0.0119	-1.18	0.9847	-0.0148	-1.00	OE
3U3PWJ	*	0.7821	-0.0214	-2.12	0.9986	-0.0009	-0.06	OE
3WBX4H		0.7993	-0.0041	-0.41	0.9917	-0.0078	-0.53	XX
3WN2LV		0.8147	0.0112	1.11	1.027	0.0271	1.83	DC
4NAFDR		0.8133	0.0099	0.98	1.030	0.0305	2.05	OE
66Y9UP		0.8053	0.0019	0.19	0.9927	-0.0069	-0.46	OE
6DUBYL		0.8083	0.0049	0.48	1.010	0.0105	0.70	OE
6XZQAL		0.7960	-0.0075	-0.74	0.9883	-0.0112	-0.75	OE
7GNU8X		0.7967	-0.0068	-0.67	0.9833	-0.0162	-1.09	OE
7QAXDC		0.8072	0.0037	0.37	0.9963	-0.0032	-0.22	OE
7UC9KT		0.8200	0.0165	1.64	1.000	0.0005	0.03	OE
8EDLTQ		0.7900	-0.0135	-1.34	0.9892	-0.0104	-0.70	IC
8M4UZF		0.8097	0.0062	0.61	1.000	0.0008	0.05	OE
8WEWN2		0.8097	0.0062	0.61	1.002	0.0028	0.19	OE
8WWFHU		0.8100	0.0065	0.64	1.010	0.0108	0.73	OE
8ZKD67		0.7880	-0.0155	-1.53	0.9783	-0.0212	-1.43	OE
A6LEVQ	*	0.8190	0.0155	1.54	0.9903	-0.0092	-0.62	OE
ACJ6G2		0.7859	-0.0175	-1.73	0.9758	-0.0237	-1.59	OE
AH7WNU		0.8223	0.0189	1.87	1.025	0.0251	1.69	OE
ANU8QK		0.8078	0.0044	0.43	1.001	0.0017	0.12	OE
BAQVJ6		0.8131	0.0096	0.95	1.001	0.0010	0.07	OE
BDRRFQ		0.8040	0.0005	0.05	1.023	0.0238	1.60	IC
BEHV37		0.8050	0.0015	0.15	1.002	0.0021	0.14	OE
BHMJJG		0.8027	-0.0008	-0.08	0.9900	-0.0095	-0.64	OE
BPJVMK	*	0.8043	0.0009	0.09	1.030	0.0305	2.05	GD
BZQTRU		0.8097	0.0062	0.61	0.9937	-0.0059	-0.39	OE
C7PEXH		0.7977	-0.0058	-0.57	0.9980	-0.0015	-0.10	OE
CRTNCX		0.8093	0.0059	0.58	1.012	0.0125	0.84	OE
CTZ3GJ		0.7833	-0.0201	-1.99	0.9733	-0.0262	-1.76	OE
CVNJTC		0.7981	-0.0054	-0.53	0.9875	-0.0120	-0.81	OE
D4FCK3		0.8010	-0.0025	-0.24	0.9997	0.0001	0.01	IC
D9PFMX		0.8053	0.0019	0.19	0.9907	-0.0089	-0.60	OE
D9TXTA		0.8010	-0.0025	-0.24	1.000	0.0005	0.03	XX
DMAZ67		0.8017	-0.0018	-0.18	1.011	0.0118	0.79	XX
DTWXGZ		0.7900	-0.0135	-1.33	0.9900	-0.0095	-0.64	OE
E328NQ		0.8200	0.0165	1.64	1.007	0.0071	0.48	OE
EK23BP		0.7960	-0.0075	-0.74	0.9897	-0.0099	-0.66	OE
EYFCWQ		0.7933	-0.0101	-1.00	0.9933	-0.0062	-0.42	IC
FDWPPC	X	0.7211	-0.0824	-8.15	0.8662	-0.1333	-8.96	OE

		Sample L41			Sample L42			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
FLMZQE	X	0.7707	-0.0328	-3.25	0.9567	-0.0429	-2.88	OE
FZM8U3		0.7893	-0.0141	-1.40	0.9820	-0.0175	-1.18	OE
GEZ2KJ	X	0.7633	-0.0401	-3.97	0.9533	-0.0462	-3.11	OE
GYUH9L		0.8113	0.0078	0.78	1.007	0.0073	0.49	OE
HTVBWB		0.8140	0.0105	1.04	1.004	0.0041	0.28	OE
J4WGKN		0.7970	-0.0065	-0.64	0.9910	-0.0085	-0.57	OE
JHF6UL		0.8027	-0.0008	-0.08	0.9970	-0.0025	-0.17	OE
JUAZVG	*	0.7737	-0.0298	-2.95	0.9587	-0.0409	-2.75	IC
JZCJ6K		0.7990	-0.0045	-0.44	0.9930	-0.0065	-0.44	OE
JZGPRA		0.7973	-0.0062	-0.61	0.9787	-0.0208	-1.40	OE
KG2666		0.8019	-0.0016	-0.15	0.9944	-0.0052	-0.35	OE
KML6GB		0.8043	0.0009	0.09	0.9983	-0.0012	-0.08	OE
KUMAG8		0.7983	-0.0051	-0.51	0.9963	-0.0032	-0.21	GD
L22FT6		0.8017	-0.0018	-0.18	1.003	0.0038	0.26	OE
LBQDBX		0.8177	0.0142	1.41	1.012	0.0125	0.84	OE
LJYXKL		0.7979	-0.0056	-0.56	0.9972	-0.0023	-0.15	OE
LKBJ82		0.8040	0.0005	0.05	0.9987	-0.0009	-0.06	OE
MVTCJH	X	0.8031	-0.0004	-0.04	0.9509	-0.0486	-3.27	OE
N6VR99		0.8060	0.0025	0.25	1.010	0.0101	0.68	OE
NKJ3VB		0.8103	0.0069	0.68	1.003	0.0038	0.26	OE
NMEW4T		0.8000	-0.0035	-0.34	1.013	0.0138	0.93	OE
NNP2FW		0.7987	-0.0048	-0.47	0.9913	-0.0082	-0.55	DR
NQVL4W		0.8047	0.0012	0.12	1.013	0.0138	0.93	OE
NWH9Y3		0.8000	-0.0035	-0.34	1.000	0.0005	0.03	OE
P6P7KK		0.7897	-0.0138	-1.36	0.9860	-0.0135	-0.91	GD
P8UYEJ		0.8094	0.0060	0.59	0.9807	-0.0188	-1.26	DR
P9MR8G		0.7939	-0.0096	-0.95	0.9987	-0.0008	-0.05	OE
PAKWTG	X	0.7807	-0.0228	-2.26	0.9347	-0.0649	-4.36	GD
PKJX2E		0.8193	0.0159	1.57	1.033	0.0331	2.23	OE
PWD9DT		0.8140	0.0105	1.04	1.007	0.0078	0.52	OE
QCMDK6		0.8083	0.0049	0.48	1.009	0.0091	0.61	IC
QLCFV9	X	0.7507	-0.0528	-5.22	0.9610	-0.0385	-2.59	OE
QWVKUC		0.7991	-0.0044	-0.43	0.9913	-0.0083	-0.56	OE
QX6MHW		0.8000	-0.0035	-0.34	1.003	0.0038	0.26	IC
RBQENH		0.8120	0.0085	0.85	1.013	0.0138	0.93	GD
RHRHRV		0.7960	-0.0075	-0.74	0.9883	-0.0112	-0.75	OE
RZC6FR		0.7978	-0.0057	-0.56	0.9912	-0.0083	-0.56	OE
T2B6M3		0.7943	-0.0091	-0.90	0.9767	-0.0229	-1.54	OE
TQGLBH		0.8200	0.0165	1.64	1.030	0.0305	2.05	OE
UHZKCK		0.7933	-0.0101	-1.00	0.9893	-0.0102	-0.69	OE
ULJFFD		0.8040	0.0005	0.05	1.003	0.0038	0.26	OE
UWJW39	X	0.7690	-0.0345	-3.41	0.9550	-0.0445	-2.99	GD
V68WMX	*	0.8300	0.0265	2.63	1.030	0.0305	2.05	OE
VNMGTV		0.8037	0.0002	0.02	0.9867	-0.0129	-0.86	OE
VQQ82V		0.8067	0.0032	0.32	1.006	0.0061	0.41	OE
W3FTFP		0.8100	0.0065	0.65	0.9833	-0.0162	-1.09	OE
WAHVQG		0.8053	0.0019	0.19	0.9980	-0.0015	-0.10	DR

Fasteners and Metals Interlaboratory Testing Program

Analysis 171

Carbon & Low Alloy Steel, Element #2

MANGANESE (Mn)

		Sample L41			Sample L42			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
WJ9CH7		0.8087	0.0052	0.52	0.9850	-0.0145	-0.98	OE
WQ3JZC		0.8087	0.0052	0.52	0.9920	-0.0075	-0.51	OE
WRFXNL		0.8070	0.0035	0.35	1.005	0.0055	0.37	IC
WVH2AG		0.8026	-0.0009	-0.08	1.003	0.0038	0.26	OE
X23GDE		0.7977	-0.0058	-0.57	0.9980	-0.0015	-0.10	OE
XCGHV6		0.8037	0.0002	0.02	1.010	0.0101	0.68	OE
XGB6FZ		0.8140	0.0105	1.04	1.007	0.0071	0.48	OE
XUD7YA		0.8077	0.0042	0.42	1.017	0.0175	1.17	OE
XUFTH9	X	0.8104	0.0069	0.68	1.007	0.0077	0.52	OE
XX388H		0.7820	-0.0215	-2.12	0.9810	-0.0185	-1.25	GD
Y6XY4X	*	0.8167	0.0132	1.31	1.040	0.0405	2.72	AE
Y9ZB87		0.8056	0.0022	0.22	0.9893	-0.0102	-0.69	OE
YQ32CF		0.8053	0.0019	0.19	1.012	0.0125	0.84	OE
YW68T4		0.8000	-0.0034	-0.34	0.9956	-0.0039	-0.26	OE
Z78WZ8		0.8143	0.0108	1.07	1.003	0.0037	0.25	OE
ZV8944		0.8139	0.0104	1.03	1.007	0.0074	0.50	DR
ZV897P		0.7960	-0.0075	-0.74	0.9867	-0.0129	-0.86	OE

Summary Statistics

	Sample L41		Sample L42	
Grand Means	0.8035	Percent	0.9995	Percent
Stnd Dev Btwn Labs	0.0101	Percent	0.0149	Percent

Samples L41, L42 : AISI 1018, A36

Statistics based on 102 of 111 reporting participants

Key to Method Codes Reported by Participants

AE	Spectrometry - Atomic Emission (AES)	DC	Spectrometry - DC Plasma (DCP)
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 #171

39PVCT (X) - Data were submitted late. Results were consistent with the other laboratories.

FDWPPC (X) - Data for both samples are low. Possible systematic error.

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

GEZ2KJ (X) - Data for both samples are low.

MVTCJH (X) - Data for sample L42 are low.

PAKWTG (X) - Data for sample L42 are low.

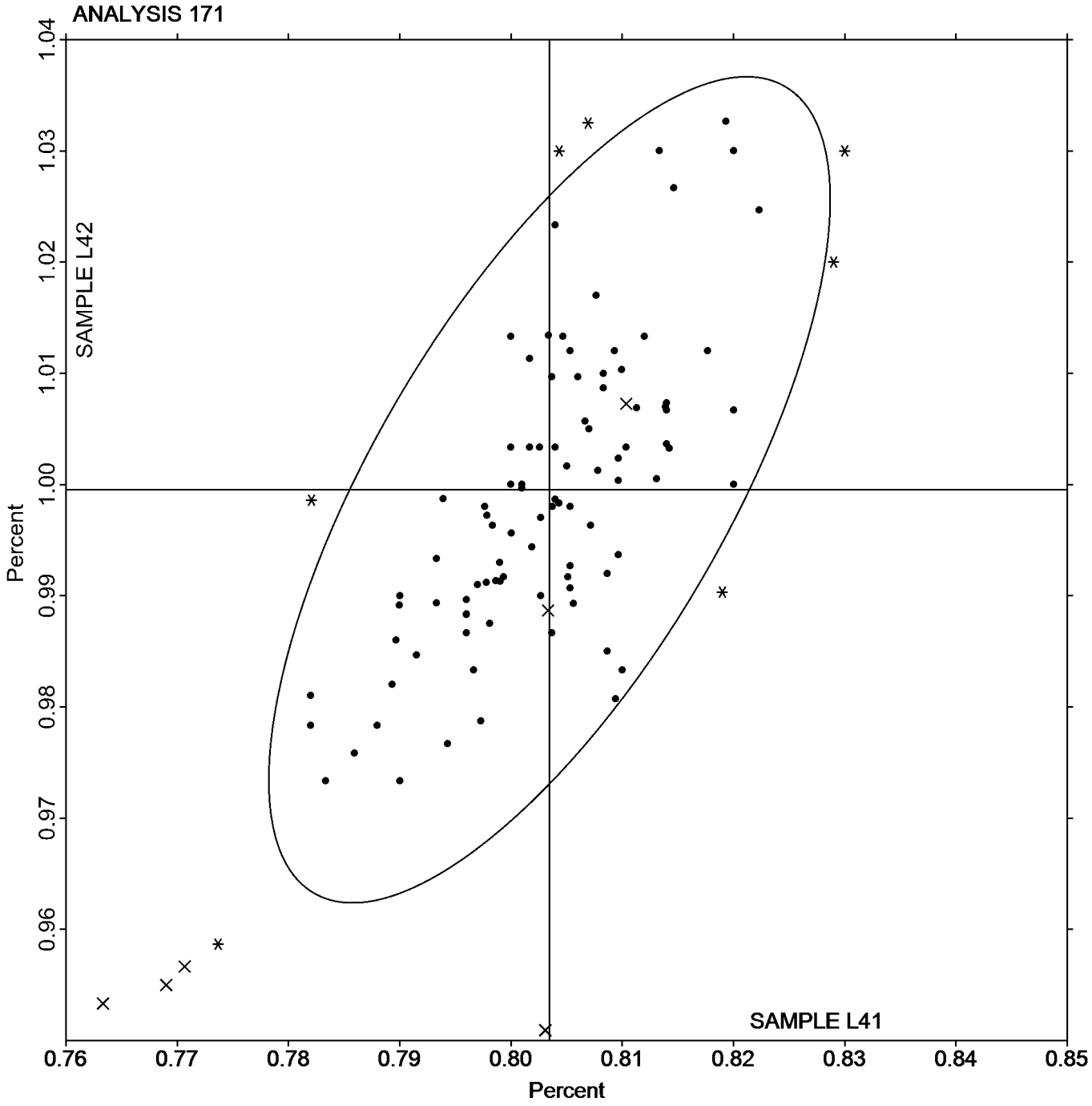
QLCFV9 (X) - Data for sample L41 are low.

UWJW39 (X) - Data for both samples are low.

XUFTH9 (X) - Data were submitted late. Results were consistent with the other laboratories.

SAMPLE L41
0.8035 Percent

SAMPLE L42
0.9995 Percent



		Sample L41			Sample L42			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
28DWJ6		0.0117	0.0008	0.89	0.0316	-0.0010	-0.37	OE
2AG4PX	*	0.0103	-0.0006	-0.63	0.0247	-0.0079	-2.92	OE
2N4ULZ		0.0108	0.0000	-0.05	0.0338	0.0012	0.43	OE
326AAV		0.0103	-0.0005	-0.59	0.0281	-0.0045	-1.66	OE
398UJY		0.0111	0.0002	0.20	0.0356	0.0030	1.09	OE
39KFX8		0.0110	0.0001	0.13	0.0338	0.0012	0.44	OE
39PVCT	X	0.0100	-0.0009	-0.95	0.0333	0.0007	0.26	OE
3BCCNL		0.0110	0.0001	0.09	0.0340	0.0014	0.50	DR
3BE3WP		0.00925	-0.0016	-1.77	0.0299	-0.0027	-0.99	OE
3U3PWJ		0.0106	-0.0003	-0.34	0.0335	0.0008	0.31	OE
3WBX4H		0.0110	0.0001	0.09	0.0360	0.0034	1.24	XX
3WN2LV		0.00950	-0.0014	-1.49	0.0337	0.0011	0.41	DC
4NAFDR		0.0107	-0.0002	-0.23	0.0333	0.0007	0.26	OE
66Y9UP		0.0107	-0.0001	-0.16	0.0326	0.0000	-0.01	OE
6DUBYL		0.0123	0.0015	1.58	0.0363	0.0037	1.36	OE
6XZQAL		0.0110	0.0001	0.13	0.0337	0.0010	0.38	OE
7GNU8X		0.0110	0.0001	0.13	0.0293	-0.0033	-1.22	OE
7QAXDC		0.0119	0.0010	1.08	0.0342	0.0015	0.57	OE
7UC9KT		0.0107	-0.0002	-0.23	0.0263	-0.0063	-2.32	OE
8EDLTQ		0.0101	-0.0007	-0.81	0.0297	-0.0030	-1.09	IC
8M4UZF		0.0108	-0.0001	-0.09	0.0336	0.0009	0.34	OE
8WEWN2		0.0117	0.0008	0.89	0.0341	0.0014	0.53	OE
8WWFHU		0.0111	0.0002	0.20	0.0338	0.0012	0.44	OE
8ZKD67		0.0120	0.0011	1.21	0.0357	0.0030	1.12	OE
A6LEVQ		0.0114	0.0005	0.56	0.0323	-0.0003	-0.12	OE
ACJ6G2		0.0103	-0.0006	-0.66	0.0324	-0.0003	-0.10	OE
AH7WNU		0.0100	-0.0009	-0.95	0.0297	-0.0030	-1.09	OE
ANU8QK		0.0106	-0.0003	-0.34	0.0327	0.0001	0.02	OE
BAQVJ6		0.0113	0.0005	0.49	0.0338	0.0012	0.43	OE
BDRRFQ		0.0107	-0.0002	-0.23	0.0283	-0.0043	-1.58	IC
BEHV37		0.0104	-0.0005	-0.52	0.0330	0.0003	0.12	OE
BHMJJG		0.0121	0.0012	1.32	0.0260	-0.0066	-2.43	OE
BPJVMK		0.0120	0.0011	1.21	0.0341	0.0015	0.54	GD
BZQTRU		0.0103	-0.0005	-0.59	0.0313	-0.0013	-0.48	OE
C7PEXH		0.0115	0.0007	0.71	0.0300	-0.0026	-0.96	OE
CRTNCX		0.00997	-0.0009	-0.99	0.0334	0.0008	0.28	OE
CTZ3GJ		0.0100	-0.0009	-0.95	0.0290	-0.0036	-1.34	OE
CVNJTC		0.0123	0.0014	1.49	0.0355	0.0028	1.04	OE
D9PFMX		0.0113	0.0005	0.49	0.0347	0.0020	0.75	OE
D9TXTA		0.0104	-0.0005	-0.52	0.0331	0.0005	0.17	OE
DMAZ67		0.0117	0.0008	0.85	0.0333	0.0007	0.26	XX
DTWXGZ	*	0.0110	0.0001	0.13	0.0260	-0.0066	-2.44	OE
E328NQ		0.0103	-0.0005	-0.59	0.0340	0.0014	0.50	OE
EK23BP		0.0110	0.0001	0.13	0.0350	0.0024	0.87	OE
EYFCWQ		0.0103	-0.0005	-0.59	0.0301	-0.0025	-0.92	IC
FDWPPC	X	0.00777	-0.0031	-3.37	0.0274	-0.0053	-1.94	OE
FLMZQE		0.0122	0.0014	1.47	0.0382	0.0056	2.05	OE

		Sample L41			Sample L42			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
FZM8U3		0.0106	-0.0003	-0.30	0.0340	0.0014	0.50	OE
GEZ2KJ	*	0.0130	0.0021	2.30	0.0317	-0.0010	-0.36	OE
GYUH9L		0.0100	-0.0009	-0.95	0.0333	0.0007	0.25	OE
HTVBWB		0.00973	-0.0011	-1.24	0.0344	0.0018	0.66	OE
J4WGKN		0.00997	-0.0009	-0.99	0.0319	-0.0007	-0.27	OE
JHF6UL		0.0120	0.0011	1.18	0.0360	0.0033	1.23	OE
JUAZVG		0.0105	-0.0003	-0.37	0.0373	0.0047	1.72	IC
JZCJ6K		0.0123	0.0015	1.58	0.0390	0.0064	2.35	OE
JZGPRA		0.0121	0.0012	1.35	0.0324	-0.0002	-0.07	OE
KG2666		0.0107	-0.0002	-0.23	0.0327	0.0001	0.02	OE
KML6GB		0.0104	-0.0004	-0.48	0.0335	0.0009	0.32	OE
KUMAG8		0.00977	-0.0011	-1.21	0.0281	-0.0046	-1.68	GD
L22FT6		0.0112	0.0003	0.35	0.0292	-0.0034	-1.27	OE
LBQDBX		0.0110	0.0001	0.13	0.0370	0.0044	1.61	OE
LJYXKL		0.0112	0.0003	0.33	0.0331	0.0005	0.18	OE
LKBJ82		0.0110	0.0001	0.13	0.0360	0.0034	1.24	OE
MVTCJH		0.0104	-0.0005	-0.51	0.0351	0.0025	0.92	OE
N6VR99		0.0118	0.0009	1.00	0.0357	0.0030	1.12	OE
NKJ3VB		0.0113	0.0004	0.42	0.0330	0.0004	0.14	OE
NMEW4T		0.0110	0.0001	0.13	0.0377	0.0050	1.85	OE
NNP2FW		0.00933	-0.0015	-1.68	0.0347	0.0020	0.75	DR
NQVL4W		0.0103	-0.0005	-0.59	0.0270	-0.0056	-2.08	OE
NWH9Y3		0.0110	0.0001	0.13	0.0327	0.0000	0.01	OE
P6P7KK		0.0127	0.0018	1.94	0.0317	-0.0010	-0.36	GD
P9MR8G		0.00977	-0.0011	-1.21	0.0310	-0.0016	-0.59	OE
PAKWTG		0.0110	0.0001	0.13	0.0307	-0.0020	-0.72	GD
PKJX2E	X	0.0143	0.0035	3.74	0.0207	-0.0120	-4.41	OE
PWD9DT		0.0120	0.0011	1.21	0.0330	0.0004	0.14	OE
QCMDK6		0.0109	0.0001	0.06	0.0291	-0.0035	-1.29	IC
QLCFV9	X	0.00500	-0.0059	-6.37	0.00500	-0.0276	-10.18	OE
QWVKUC		0.0118	0.0010	1.03	0.0357	0.0031	1.13	OE
QX6MHW		0.0101	-0.0008	-0.84	0.0304	-0.0023	-0.84	IC
RBQENH		0.0129	0.0020	2.15	0.0333	0.0007	0.26	GD
RHRHRV	X	0.0147	0.0038	4.10	0.0333	0.0007	0.25	OE
RZC6FR		0.0112	0.0003	0.35	0.0325	-0.0001	-0.05	OE
T2B6M3		0.00947	-0.0014	-1.53	0.0308	-0.0019	-0.69	OE
UHZKCK		0.00977	-0.0011	-1.21	0.0277	-0.0050	-1.83	OE
ULJFFD		0.0120	0.0011	1.21	0.0331	0.0005	0.18	OE
UWJW39		0.0120	0.0011	1.21	0.0333	0.0007	0.26	GD
V68WMX	X	0.0100	-0.0009	-0.95	0.0200	-0.0126	-4.65	OE
VNMGTV		0.0107	-0.0002	-0.23	0.0330	0.0004	0.14	OE
VQQ82V		0.0124	0.0015	1.61	0.0357	0.0031	1.14	OE
W3FTFP	*	0.0127	0.0018	1.94	0.0303	-0.0023	-0.85	OE
WAHVQG		0.0105	-0.0004	-0.45	0.0339	0.0012	0.45	DR
WJ9CH7		0.0116	0.0007	0.78	0.0333	0.0007	0.26	OE
WQ3JZC		0.0104	-0.0004	-0.48	0.0324	-0.0002	-0.09	OE
WRFXNL		0.0103	-0.0005	-0.59	0.0329	0.0003	0.10	IC

Fasteners and Metals Interlaboratory Testing Program

Analysis 172

Carbon & Low Alloy Steel, Element #3

PHOSPHORUS (P)

		Sample L41			Sample L42			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
WVH2AG		0.00993	-0.0009	-1.02	0.0303	-0.0023	-0.86	OE
X23GDE		0.0103	-0.0006	-0.66	0.0320	-0.0007	-0.25	OE
XCGHV6		0.0100	-0.0009	-0.95	0.0327	0.0000	0.01	OE
XGB6FZ	X	0.00763	-0.0032	-3.52	0.0273	-0.0053	-1.95	OE
XUFTH9	X	0.0106	-0.0003	-0.35	0.0341	0.0014	0.53	OE
XX388H		0.0120	0.0011	1.21	0.0330	0.0004	0.14	GD
Y6XY4X	*	0.00800	-0.0029	-3.12	0.0295	-0.0031	-1.15	AE
Y9ZB87		0.0101	-0.0008	-0.88	0.0351	0.0025	0.91	OE
YQ32CF		0.0108	-0.0001	-0.12	0.0334	0.0008	0.28	OE
YW68T4		0.0118	0.0010	1.04	0.0337	0.0011	0.41	OE
Z78WZ8		0.0101	-0.0008	-0.84	0.0329	0.0003	0.10	OE
ZV8944		0.00910	-0.0018	-1.93	0.0279	-0.0048	-1.76	DR
ZV897P		0.00983	-0.0010	-1.13	0.0311	-0.0015	-0.56	OE

Summary Statistics

	Sample L41		Sample L42	
Grand Means	0.0109	Percent	0.0326	Percent
Stnd Dev Btwn Labs	0.0009	Percent	0.0027	Percent

Samples L41, L42 : AISI 1018, A36

Statistics based on 98 of 107 reporting participants

Key to Method Codes Reported by Participants

AE	Spectrometry - Atomic Emission (AES)	DC	Spectrometry - DC Plasma (DCP)
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 #172

39PVCT (X) - Data were submitted late. Results were consistent with the other laboratories.

FDWPPC (X) - Data for sample L41 are low. Inconsistent within the determinations of sample L42.

PKJX2E (X) - Data for sample L41 are high and data for sample L42 are low. Inconsistent within the determinations of sample L42.

QLCFV9 (X) - Data for both samples are low.

RHRHRV (X) - Data for sample L41 are high.

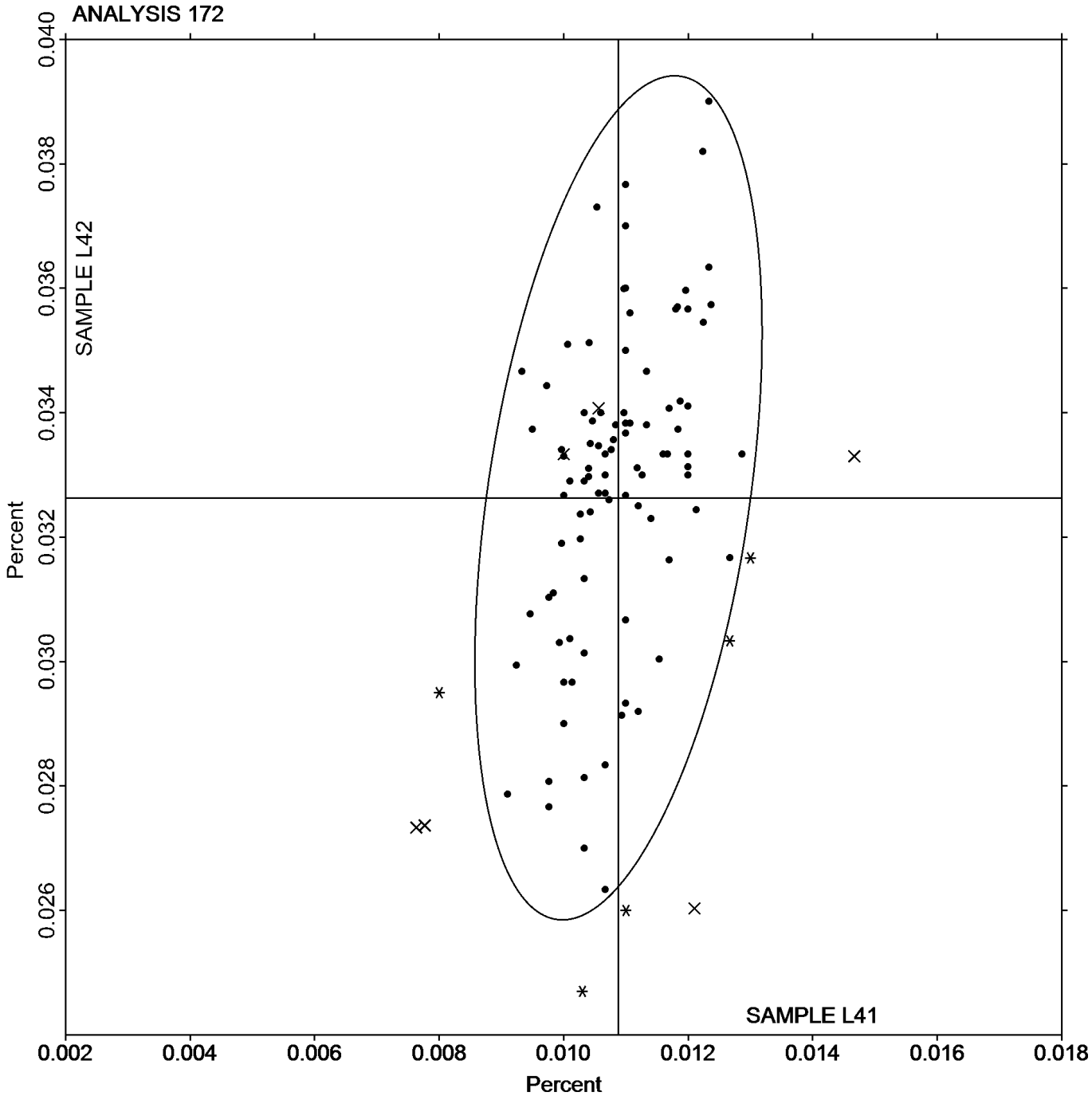
V68WMX (X) - Data for sample L42 are low. Inconsistent within the determinations of sample L41.

XGB6FZ (X) - Data for sample L41 are low.

XUFTH9 (X) - Data were submitted late. Results were consistent with the other laboratories.

SAMPLE L41
0.0109 Percent

SAMPLE L42
0.0326 Percent



		Sample L41			Sample L42			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
28DWJ6		0.0361	0.0036	1.59	0.0224	0.0016	0.86	OE
2AG4PX		0.0294	-0.0031	-1.38	0.0181	-0.0027	-1.48	OE
2N4ULZ	*	0.0263	-0.0063	-2.76	0.0187	-0.0021	-1.15	OE
326AAV		0.0335	0.0009	0.42	0.0222	0.0014	0.75	OE
398UJY		0.0343	0.0018	0.80	0.0219	0.0011	0.58	OE
39KFX8		0.0316	-0.0009	-0.41	0.0217	0.0009	0.49	OE
39PVCT	X	0.0340	0.0015	0.65	0.0200	-0.0008	-0.44	CI
3BE3WP		0.0270	-0.0055	-2.42	0.0177	-0.0031	-1.68	OE
3U3PWJ		0.0282	-0.0044	-1.92	0.0206	-0.0002	-0.11	OE
3WBX4H		0.0353	0.0028	1.23	0.0238	0.0030	1.66	XX
3WN2LV		0.0316	-0.0009	-0.39	0.0207	-0.0001	-0.04	DC
4NAFDR		0.0310	-0.0015	-0.67	0.0217	0.0009	0.47	OE
66Y9UP		0.0323	-0.0002	-0.08	0.0199	-0.0009	-0.48	CI
6DUBYL		0.0313	-0.0012	-0.53	0.0203	-0.0005	-0.26	OE
6NNU6E	X	0.0402	0.0076	3.37	0.0236	0.0028	1.53	XX
6XZQAL		0.0353	0.0028	1.24	0.0230	0.0022	1.20	OE
6ZH86B		0.0310	-0.0015	-0.66	0.0193	-0.0015	-0.81	XX
7GNU8X		0.0320	-0.0005	-0.23	0.0213	0.0005	0.29	OE
7QAXDC	*	0.0349	0.0024	1.05	0.0258	0.0050	2.75	OE
7UC9KT		0.0337	0.0011	0.50	0.0213	0.0005	0.29	OE
8EDLTQ		0.0313	-0.0012	-0.53	0.0190	-0.0018	-0.99	CI
8M4UZF		0.0323	-0.0002	-0.10	0.0193	-0.0015	-0.82	CI
8WEWN2	*	0.0364	0.0039	1.73	0.0203	-0.0005	-0.29	OE
8WWFHU		0.0329	0.0004	0.17	0.0207	-0.0001	-0.08	XX
8ZKD67	*	0.0353	0.0028	1.24	0.0253	0.0045	2.48	OE
A6LEVQ		0.0331	0.0006	0.25	0.0205	-0.0003	-0.15	OE
ACJ6G2		0.0315	-0.0011	-0.47	0.0196	-0.0012	-0.64	CI
AH7WNU		0.0323	-0.0002	-0.08	0.0203	-0.0005	-0.26	XX
ANU8QK		0.0294	-0.0032	-1.39	0.0197	-0.0011	-0.59	OE
BAQVJ6		0.0337	0.0012	0.53	0.0207	-0.0001	-0.08	OE
BDRRFQ		0.0330	0.0005	0.21	0.0200	-0.0008	-0.44	CI
BEHV37		0.0331	0.0006	0.25	0.0205	-0.0003	-0.18	OE
BHMJJG		0.0327	0.0002	0.09	0.0231	0.0023	1.28	OE
BPJVMK		0.0351	0.0025	1.12	0.0210	0.0002	0.11	GD
BZQTRU		0.0331	0.0006	0.25	0.0212	0.0004	0.22	OE
C7PEXH		0.0298	-0.0027	-1.19	0.0189	-0.0019	-1.03	OE
CRTNCX		0.0354	0.0028	1.25	0.0229	0.0021	1.17	OE
CTZ3GJ		0.0288	-0.0038	-1.66	0.0168	-0.0040	-2.19	OE
CVNJTC		0.0325	0.0000	-0.02	0.0216	0.0008	0.46	OE
D4FCK3		0.0339	0.0014	0.62	0.0215	0.0007	0.36	CI
D9PFMX	*	0.0353	0.0028	1.24	0.0187	-0.0021	-1.17	OE
D9TXTA		0.0340	0.0015	0.65	0.0200	-0.0008	-0.44	XX
DMAZ67		0.0317	-0.0009	-0.38	0.0193	-0.0015	-0.81	XX
DTWXGZ	X	0.00340	-0.0291	-12.86	0.00243	-0.0184	-10.07	OE
E328NQ		0.0330	0.0005	0.21	0.0210	0.0002	0.11	OE
EK23BP		0.0363	0.0038	1.68	0.0243	0.0035	1.93	CI
EYFCWQ		0.0337	0.0011	0.50	0.0210	0.0002	0.11	OE

		Sample L41			Sample L42			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
FDWPPC		0.0275	-0.0050	-2.22	0.0183	-0.0025	-1.35	OE
FLMZQE		0.0330	0.0005	0.22	0.0206	-0.0002	-0.13	OE
FZM8U3		0.0326	0.0001	0.05	0.0222	0.0014	0.76	OE
GEZ2KJ		0.0307	-0.0019	-0.82	0.0217	0.0009	0.47	OE
GYUH9L		0.0347	0.0022	0.96	0.0244	0.0036	1.99	OE
HTVBWB		0.0340	0.0015	0.67	0.0237	0.0029	1.61	OE
J4WGKN	*	0.0345	0.0019	0.86	0.0181	-0.0027	-1.50	OE
JHF6UL		0.0297	-0.0029	-1.26	0.0197	-0.0011	-0.61	OE
JUAZVG		0.0356	0.0031	1.36	0.0214	0.0006	0.34	CI
JZCJ6K		0.0330	0.0005	0.21	0.0203	-0.0005	-0.26	OE
JZGPRA		0.0309	-0.0016	-0.72	0.0194	-0.0014	-0.77	OE
KG2666		0.0326	0.0001	0.05	0.0200	-0.0008	-0.44	OE
KML6GB		0.0325	-0.0001	-0.03	0.0219	0.0011	0.62	OE
KUMAG8		0.0307	-0.0018	-0.81	0.0191	-0.0017	-0.93	GD
L22FT6		0.0327	0.0002	0.08	0.0202	-0.0006	-0.35	CO
LBQDBX		0.0312	-0.0014	-0.60	0.0209	0.0001	0.03	CO
LJYXKL		0.0336	0.0011	0.46	0.0222	0.0014	0.76	OE
LKBJ82		0.0330	0.0005	0.21	0.0210	0.0002	0.11	OE
MVTCJH		0.0317	-0.0008	-0.35	0.0204	-0.0004	-0.20	CI
N6VR99		0.0334	0.0009	0.40	0.0212	0.0004	0.20	OE
NKJ3VB		0.0345	0.0020	0.87	0.0207	-0.0001	-0.06	OE
NMEW4T		0.0302	-0.0023	-1.03	0.0192	-0.0016	-0.86	CI
NNP2FW		0.0333	0.0008	0.36	0.0220	0.0012	0.66	DR
NQVL4W		0.0337	0.0011	0.50	0.0227	0.0019	1.02	OE
NWH9Y3		0.0313	-0.0012	-0.53	0.0210	0.0002	0.11	OE
P6P7KK		0.0287	-0.0039	-1.70	0.0187	-0.0021	-1.17	GD
P9MR8G		0.0316	-0.0009	-0.41	0.0199	-0.0009	-0.48	OE
PAKWTG		0.0303	-0.0022	-0.97	0.0190	-0.0018	-0.99	GD
PKJX2E	X	0.0267	-0.0059	-2.59	0.0230	0.0022	1.20	OE
PWD9DT		0.0350	0.0025	1.09	0.0220	0.0012	0.66	CI
QCMDK6		0.0337	0.0012	0.52	0.0212	0.0004	0.24	CI
QLCFV9	X	0.00300	-0.0295	-13.04	0.00300	-0.0178	-9.76	OE
QWVKUC		0.0326	0.0001	0.05	0.0241	0.0033	1.79	OE
QX6MHW		0.0313	-0.0012	-0.53	0.0197	-0.0011	-0.62	CI
RBQENH		0.0315	-0.0010	-0.44	0.0210	0.0002	0.09	GD
RHRHRV		0.0295	-0.0030	-1.34	0.0173	-0.0035	-1.92	OE
RZC6FR		0.0344	0.0019	0.83	0.0202	-0.0006	-0.33	OE
T2B6M3		0.0306	-0.0019	-0.84	0.0190	-0.0018	-0.97	OE
UHZKCK		0.0308	-0.0017	-0.76	0.0199	-0.0009	-0.48	OE
ULJFFD		0.0329	0.0003	0.15	0.0237	0.0029	1.59	OE
UWJW39		0.0350	0.0025	1.09	0.0230	0.0022	1.20	GD
V68WMX	X	0.0233	-0.0092	-4.06	0.0157	-0.0051	-2.82	OE
VNMGTV		0.0377	0.0051	2.27	0.0237	0.0029	1.57	OE
VQQ82V		0.0348	0.0023	1.02	0.0216	0.0008	0.44	CI
W3FTFP		0.0333	0.0008	0.36	0.0205	-0.0003	-0.17	CI
WAHVQG	*	0.0330	0.0005	0.21	0.0176	-0.0032	-1.76	DR
WJ9CH7		0.0314	-0.0012	-0.51	0.0207	-0.0001	-0.08	OE

Fasteners and Metals Interlaboratory Testing Program

Analysis 173

Carbon & Low Alloy Steel, Element #4

SULFUR (S)

Cycle 117
1st Qtr 2017

WebCode	Data Flag	Sample L41 Lab Mean	Sample L41 Diff. from Grand Mean	Sample L41 CPV	Sample L42 Lab Mean	Sample L42 Diff. from Grand Mean	Sample L42 CPV	Method
WQ3JZC		0.0323	-0.0002	-0.08	0.0225	0.0017	0.91	OE
WRFXNL		0.0299	-0.0026	-1.14	0.0190	-0.0018	-0.97	CO
WVH2AG		0.0300	-0.0026	-1.13	0.0191	-0.0017	-0.95	OE
X23GDE		0.0355	0.0029	1.30	0.0222	0.0014	0.75	CI
XCGHV6		0.0357	0.0031	1.39	0.0233	0.0025	1.39	OE
XGB6FZ		0.0300	-0.0026	-1.13	0.0209	0.0001	0.07	OE
XUD7YA		0.0344	0.0019	0.84	0.0206	-0.0002	-0.13	CI
XUFTH9	X	0.0329	0.0003	0.15	0.0197	-0.0011	-0.62	CO
XX388H		0.0380	0.0055	2.42	0.0230	0.0022	1.20	GD
Y6XY4X	*	0.0292	-0.0034	-1.48	0.0162	-0.0046	-2.54	XX
Y9ZB87		0.0325	0.0000	0.00	0.0208	0.0000	0.02	OE
YQ32CF		0.0307	-0.0019	-0.82	0.0201	-0.0007	-0.40	OE
YW68T4		0.0343	0.0017	0.76	0.0236	0.0028	1.51	OE
Z78WZ8		0.0335	0.0009	0.42	0.0209	0.0001	0.05	CI
ZV8944		0.0291	-0.0034	-1.51	0.0182	-0.0026	-1.41	DR
ZV897P		0.0316	-0.0009	-0.41	0.0195	-0.0013	-0.71	OE

Summary Statistics

	Sample L41		Sample L42	
Grand Means	0.0325	Percent	0.0208	Percent
Stnd Dev Btwn Labs	0.0023	Percent	0.0018	Percent

Samples L41, L42 : AISI 1018, A36

Statistics based on 103 of 110 reporting participants

Key to Method Codes Reported by Participants

CI	Combustion / IR	CO	Combustion
DC	Spectrometry - DC Plasma (DCP)	DR	Spectrometry - Direct Reading OE (DROES)
GD	Spectrometry - Glow Discharge (GDS)	OE	Spectrometry - Optical Emission (OES)
XX	Please Indicate Method Used for Current Element		

Comments on Assigned Data Flags for Test #173

39PVCT (X) - Data were submitted late. Results were consistent with the other laboratories.

6NNU6E (X) - Data for sample L41 are high.

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

PKJX2E (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample L42.

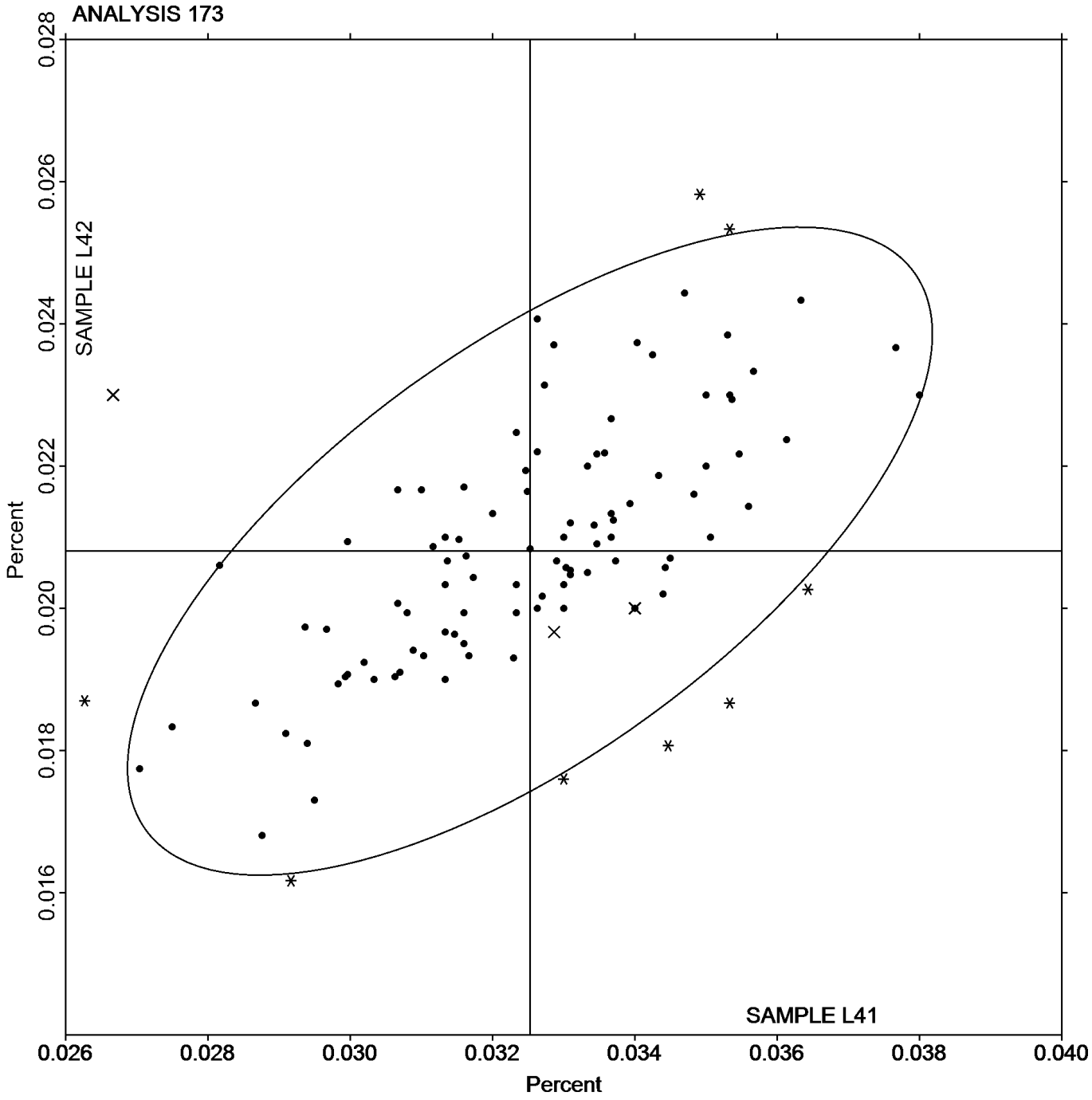
QLCFV9 (X) - Data for both samples are low.

V68WMX (X) - Data for both samples are low.

XUFTH9 (X) - Data were submitted late. Results were consistent with the other laboratories.

SAMPLE L41
0.0325 Percent

SAMPLE L42
0.0208 Percent



		Sample L41			Sample L42			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
28DWJ6		0.2877	0.0036	0.57	0.1797	-0.0015	-0.33	OE
2AG4PX		0.2693	-0.0147	-2.30	0.1707	-0.0105	-2.28	OE
2N4ULZ		0.2950	0.0110	1.72	0.1873	0.0062	1.34	OE
326AAV		0.2718	-0.0122	-1.91	0.1735	-0.0077	-1.68	OE
398UJY		0.2813	-0.0028	-0.43	0.1792	-0.0020	-0.44	OE
39KFX8		0.2904	0.0064	1.00	0.1869	0.0058	1.25	OE
39PVCT	X	0.2773	-0.0067	-1.05	0.1737	-0.0075	-1.63	OE
3BCCNL		0.2837	-0.0004	-0.06	0.1852	0.0041	0.88	DR
3BE3WP		0.2708	-0.0132	-2.07	0.1708	-0.0104	-2.27	OE
3U3PWJ		0.2832	-0.0009	-0.13	0.1874	0.0062	1.36	OE
3WBX4H		0.2798	-0.0042	-0.66	0.1806	-0.0006	-0.12	XX
3WN2LV	X	0.3457	0.0616	9.65	0.2180	0.0368	8.01	DC
4NAFDR	X	0.2563	-0.0277	-4.33	0.1710	-0.0102	-2.21	OE
66Y9UP		0.2840	0.0000	0.00	0.1773	-0.0038	-0.83	OE
6DUBYL		0.2830	-0.0010	-0.16	0.1780	-0.0032	-0.69	OE
6XZQAL		0.2823	-0.0017	-0.26	0.1783	-0.0028	-0.62	OE
7GNU8X		0.2733	-0.0107	-1.67	0.1800	-0.0012	-0.25	OE
7QAXDC		0.2817	-0.0023	-0.36	0.1773	-0.0039	-0.84	OE
7UC9KT		0.2873	0.0033	0.52	0.1823	0.0012	0.25	OE
8EDLTQ		0.2869	0.0029	0.46	0.1845	0.0034	0.73	IC
8M4UZF		0.2780	-0.0060	-0.94	0.1760	-0.0052	-1.12	OE
8WEWN2		0.2842	0.0002	0.03	0.1797	-0.0015	-0.33	OE
8WWFHU		0.2963	0.0122	1.92	0.1889	0.0077	1.68	OE
8ZKD67		0.2907	0.0066	1.04	0.1870	0.0058	1.27	OE
A6LEVQ	*	0.2747	-0.0094	-1.46	0.1840	0.0028	0.62	OE
ACJ6G2		0.2900	0.0060	0.94	0.1866	0.0054	1.18	OE
AH7WNU	X	0.3047	0.0206	3.23	0.1853	0.0042	0.91	OE
ANU8QK		0.2808	-0.0032	-0.50	0.1821	0.0010	0.21	OE
BAQVJ6		0.2901	0.0061	0.95	0.1803	-0.0009	-0.20	OE
BDRRFQ		0.2807	-0.0034	-0.53	0.1823	0.0012	0.25	IC
BEHV37		0.2820	-0.0020	-0.32	0.1813	0.0002	0.04	OE
BHMJJG		0.2967	0.0126	1.98	0.1873	0.0062	1.34	OE
BPJVMK		0.2913	0.0073	1.14	0.1870	0.0058	1.27	GD
BZQTRU		0.2753	-0.0087	-1.36	0.1770	-0.0042	-0.91	OE
C7PEXH		0.2799	-0.0041	-0.64	0.1832	0.0020	0.44	OE
CRTNCX		0.2937	0.0096	1.51	0.1837	0.0025	0.54	OE
CTZ3GJ		0.2800	-0.0040	-0.63	0.1770	-0.0042	-0.91	OE
CVNJTC		0.2827	-0.0013	-0.21	0.1833	0.0021	0.46	OE
D4FCK3		0.2917	0.0076	1.20	0.1870	0.0058	1.27	IC
D9PFMX		0.2863	0.0023	0.36	0.1830	0.0018	0.40	OE
D9TXTA		0.2850	0.0010	0.15	0.1810	-0.0002	-0.04	XX
DMAZ67		0.2823	-0.0017	-0.26	0.1820	0.0008	0.18	XX
DTWXGZ		0.2773	-0.0067	-1.05	0.1823	0.0012	0.25	OE
E328NQ		0.2900	0.0060	0.94	0.1833	0.0022	0.47	OE
EK23BP		0.2827	-0.0014	-0.21	0.1793	-0.0018	-0.40	OE
EYFCWQ		0.2860	0.0020	0.31	0.1757	-0.0055	-1.20	IC
FDWPPC	X	0.2584	-0.0257	-4.02	0.1678	-0.0133	-2.90	OE

		Sample L41			Sample L42			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
FLMZQE	X	0.3230	0.0390	6.10	0.2053	0.0242	5.26	OE
FZM8U3		0.2803	-0.0037	-0.58	0.1783	-0.0028	-0.62	OE
GEZ2KJ		0.2740	-0.0100	-1.57	0.1767	-0.0045	-0.98	OE
GYUH9L		0.2909	0.0068	1.07	0.1824	0.0012	0.26	OE
HTVBWB		0.2887	0.0046	0.73	0.1837	0.0025	0.54	OE
J4WGKN		0.2857	0.0016	0.26	0.1820	0.0008	0.18	OE
JHF6UL		0.2857	0.0016	0.26	0.1830	0.0018	0.40	OE
JUAZVG	*	0.2660	-0.0180	-2.82	0.1680	-0.0132	-2.86	IC
JZCJ6K		0.2913	0.0073	1.14	0.1847	0.0035	0.76	OE
JZGPRA		0.2830	-0.0010	-0.15	0.1809	-0.0003	-0.06	OE
KG2666		0.2815	-0.0026	-0.40	0.1772	-0.0040	-0.86	OE
KML6GB		0.2817	-0.0024	-0.37	0.1793	-0.0018	-0.40	OE
KUMAG8		0.2863	0.0023	0.36	0.1817	0.0005	0.11	GD
L22FT6		0.2913	0.0073	1.14	0.1867	0.0055	1.20	OE
LBQDBX		0.2837	-0.0004	-0.06	0.1843	0.0032	0.69	OE
LJYXKL		0.2791	-0.0049	-0.77	0.1805	-0.0007	-0.15	OE
LKBJ82	X	0.3093	0.0253	3.96	0.1990	0.0178	3.88	OE
MVTCJH		0.2957	0.0117	1.83	0.1719	-0.0093	-2.02	OE
N6VR99		0.2870	0.0030	0.47	0.1827	0.0015	0.33	OE
NKJ3VB		0.2893	0.0053	0.83	0.1837	0.0025	0.54	OE
NMEW4T		0.2717	-0.0124	-1.93	0.1783	-0.0028	-0.62	OE
NNP2FW		0.2840	0.0000	0.00	0.1800	-0.0012	-0.25	DR
NQVL4W		0.2807	-0.0034	-0.53	0.1817	0.0005	0.11	OE
NWH9Y3		0.2867	0.0026	0.41	0.1840	0.0028	0.62	OE
P6P7KK	*	0.2843	0.0003	0.05	0.1723	-0.0088	-1.92	GD
P8UYEJ		0.2876	0.0036	0.56	0.1840	0.0029	0.62	DR
P9MR8G		0.2868	0.0027	0.43	0.1819	0.0007	0.15	OE
PAKWTG		0.2743	-0.0097	-1.52	0.1790	-0.0022	-0.47	GD
PKJX2E	X	0.3427	0.0586	9.18	0.2593	0.0782	17.01	OE
PWD9DT		0.2867	0.0026	0.41	0.1823	0.0012	0.25	OE
QCMDK6		0.2840	0.0000	0.00	0.1867	0.0055	1.20	IC
QLCFV9	*	0.2767	-0.0074	-1.15	0.1700	-0.0112	-2.43	OE
QWVKUC		0.2856	0.0016	0.25	0.1854	0.0043	0.93	OE
QX6MHW		0.2870	0.0030	0.47	0.1773	-0.0038	-0.83	GR
RBQENH		0.2890	0.0050	0.78	0.1877	0.0065	1.41	GD
RHRHRV		0.2931	0.0090	1.42	0.1800	-0.0012	-0.26	OE
RZC6FR		0.2864	0.0024	0.37	0.1859	0.0047	1.03	OE
T2B6M3		0.2793	-0.0047	-0.73	0.1807	-0.0005	-0.11	OE
TQGLBH		0.2973	0.0133	2.08	0.1923	0.0112	2.43	OE
UHZKCK		0.2943	0.0103	1.61	0.1873	0.0062	1.34	OE
ULJFFD		0.2903	0.0063	0.99	0.1857	0.0045	0.98	OE
UWJW39		0.2863	0.0023	0.36	0.1833	0.0022	0.47	GD
V68WMX		0.2863	0.0023	0.36	0.1773	-0.0038	-0.83	OE
VNMGTV		0.2757	-0.0084	-1.31	0.1750	-0.0062	-1.34	OE
VQQ82V		0.2897	0.0056	0.88	0.1820	0.0008	0.18	OE
W3FTFP		0.2933	0.0093	1.46	0.1900	0.0088	1.92	OE
WAHVQG		0.2810	-0.0030	-0.47	0.1800	-0.0012	-0.25	DR

Fasteners and Metals Interlaboratory Testing Program

Analysis 174

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

		Sample L41			Sample L42			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
WJ9CH7		0.2873	0.0033	0.52	0.1773	-0.0038	-0.83	OE
WQ3JZC		0.2863	0.0023	0.36	0.1820	0.0008	0.18	OE
WRFXNL		0.2880	0.0040	0.62	0.1813	0.0002	0.04	IC
WVH2AG		0.2718	-0.0122	-1.91	0.1757	-0.0054	-1.18	OE
X23GDE		0.2800	-0.0040	-0.63	0.1787	-0.0025	-0.54	OE
XCGHV6		0.2770	-0.0070	-1.10	0.1753	-0.0058	-1.27	OE
XGB6FZ		0.2790	-0.0050	-0.79	0.1813	0.0002	0.04	OE
XUD7YA		0.2867	0.0026	0.41	0.1937	0.0125	2.72	OE
XUFTH9	X	0.2861	0.0021	0.33	0.1862	0.0051	1.10	OE
XX388H		0.2890	0.0050	0.78	0.1870	0.0058	1.27	GD
Y6XY4X		0.2783	-0.0057	-0.89	0.1776	-0.0036	-0.78	AE
Y9ZB87	*	0.2821	-0.0019	-0.30	0.1722	-0.0089	-1.94	OE
YQ32CF	X	0.2420	-0.0420	-6.58	0.1453	-0.0358	-7.80	OE
YW68T4		0.2888	0.0047	0.74	0.1840	0.0029	0.62	OE
Z78WZ8		0.2874	0.0033	0.52	0.1829	0.0017	0.38	OE
ZV8944		0.2807	-0.0033	-0.51	0.1761	-0.0051	-1.11	DR
ZV897P		0.2787	-0.0054	-0.84	0.1787	-0.0025	-0.54	OE

Summary Statistics

	Sample L41		Sample L42	
Grand Means	0.2840	Percent	0.1812	Percent
Stnd Dev Btwn Labs	0.0064	Percent	0.0046	Percent

Samples L41, L42 : AISI 1018, A36

Statistics based on 99 of 111 reporting participants

Key to Method Codes Reported by Participants

AE	Spectrometry - Atomic Emission (AES)	DC	Spectrometry - DC Plasma (DCP)
DR	Spectrometry - Direct Reading OE (DROES)	GD	Spectrometry - Glow Discharge (GDS)
GR	Gravimetry	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 #174

39PVCT (X) - Data were submitted late. Results were consistent with the other laboratories.

3WN2LV (X) - Data for both samples are high.

4NAFDR (X) - Data for sample L41 are low.

AH7WNU (X) - Data for sample L41 are high.

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

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

LKBJ82 (X) - Data for both samples are high.

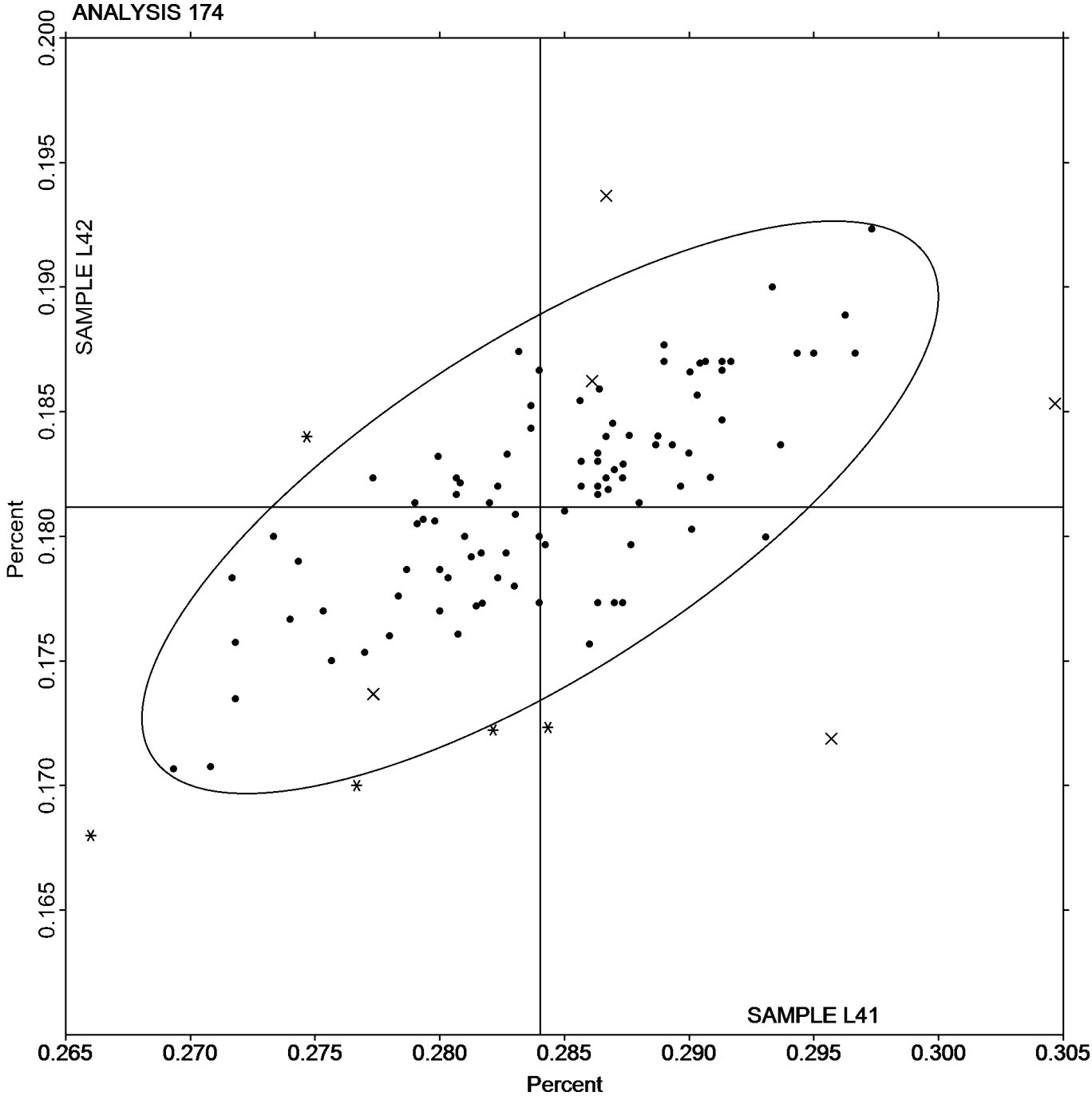
PKJX2E (X) - Data for both samples are high. Inconsistent within the determinations of both samples.

XUFTH9 (X) - Data were submitted late. Results were consistent with the other laboratories.

YQ32CF (X) - Data for both samples are low.

SAMPLE L41
0.2840 Percent

SAMPLE L42
0.1812 Percent



		Sample L41			Sample L42			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
28DWJ6		0.00627	-0.00018	-0.23	0.00410	0.00005	0.07	OE
2AG4PX		0.00707	0.00062	0.79	0.00443	0.00039	0.54	OE
2N4ULZ		0.00690	0.00045	0.58	0.00400	-0.00005	-0.07	OE
398UJY		0.00663	0.00018	0.24	0.00417	0.00012	0.17	OE
3BCCNL		0.00623	-0.00022	-0.28	0.00390	-0.00015	-0.21	DR
3BE3WP	X	0.00704	0.00059	0.76	0.00574	0.00169	2.37	OE
3U3PWJ		0.00590	-0.00055	-0.70	0.00403	-0.00001	-0.02	OE
3WBX4H		0.00617	-0.00028	-0.35	0.00393	-0.00012	-0.16	XX
66Y9UP		0.00590	-0.00055	-0.70	0.00347	-0.00058	-0.81	IC
6DUBYL		0.00717	0.00072	0.92	0.00483	0.00079	1.10	OE
6XZQAL		0.00670	0.00025	0.32	0.00437	0.00032	0.45	OE
7GNU8X	*	0.00867	0.00222	2.84	0.00600	0.00195	2.74	OE
7UC9KT		0.00613	-0.00032	-0.40	0.00243	-0.00161	-2.27	OE
8EDLTQ		0.00577	-0.00068	-0.87	0.00360	-0.00045	-0.63	IC
8M4UZF		0.00600	-0.00045	-0.58	0.00360	-0.00045	-0.63	OE
8WEWN2		0.00740	0.00095	1.22	0.00437	0.00032	0.45	OE
8ZKD67		0.00567	-0.00078	-1.00	0.00300	-0.00105	-1.47	OE
A6LEVQ		0.00777	0.00132	1.69	0.00280	-0.00125	-1.75	OE
ACJ6G2		0.00643	-0.00002	-0.02	0.00390	-0.00015	-0.21	OE
ANU8QK		0.00780	0.00135	1.73	0.00500	0.00095	1.34	OE
BAQVJ6		0.00690	0.00045	0.58	0.00443	0.00039	0.54	OE
BEHV37		0.00630	-0.00015	-0.19	0.00383	-0.00021	-0.30	OE
BHMJJG		0.00760	0.00115	1.47	0.00499	0.00095	1.33	OE
BPJVMK	X	0.00120	-0.00525	-6.73	0.00093	-0.00311	-4.37	GD
BZQTRU		0.00657	0.00012	0.15	0.00427	0.00022	0.31	OE
C7PEXH		0.00597	-0.00048	-0.62	0.00367	-0.00038	-0.53	OE
CVNJTC		0.00697	0.00052	0.67	0.00432	0.00027	0.38	OE
D9PFMX		0.00700	0.00055	0.71	0.00433	0.00029	0.40	OE
D9TXTA		0.00650	0.00005	0.06	0.00470	0.00065	0.92	XX
DMAZ67		0.00600	-0.00045	-0.58	0.00400	-0.00005	-0.07	XX
EK23BP		0.00633	-0.00012	-0.15	0.00400	-0.00005	-0.07	OE
EYFCWQ		0.00693	0.00048	0.62	0.00457	0.00052	0.73	IC
FLMZQE		0.00710	0.00065	0.83	0.00527	0.00122	1.71	OE
FZM8U3		0.00687	0.00042	0.53	0.00433	0.00029	0.40	OE
J4WGKN		0.00600	-0.00045	-0.58	0.00400	-0.00005	-0.07	OE
JUAZVG	M	0.00673	0.00028	0.36	No Data Reported			IC
JZCJ6K		0.00577	-0.00068	-0.87	0.00357	-0.00048	-0.67	OE
JZGPRA		0.00839	0.00194	2.49	0.00573	0.00169	2.37	OE
KG2666		0.00720	0.00075	0.96	0.00480	0.00075	1.06	OE
KML6GB		0.00593	-0.00052	-0.66	0.00380	-0.00025	-0.35	OE
L22FT6		0.00647	0.00002	0.02	0.00433	0.00029	0.40	OE
LBQDBX		0.00600	-0.00045	-0.58	0.00400	-0.00005	-0.07	OE
LJYXKL		0.00591	-0.00054	-0.69	0.00363	-0.00042	-0.59	OE
LKBJ82		0.00677	0.00032	0.41	0.00403	-0.00001	-0.02	OE
MVTCJH		0.00602	-0.00043	-0.55	0.00326	-0.00079	-1.11	OE
N6VR99		0.00590	-0.00055	-0.70	0.00360	-0.00045	-0.63	OE
NKJ3VB	*	0.00423	-0.00222	-2.84	0.00217	-0.00188	-2.64	OE

Fasteners and Metals Interlaboratory Testing Program

Analysis 175

Carbon & Low Alloy Steel, Element #6
COBALT (Co)

Cycle 117
1st Qtr 2017

		Sample L41			Sample L42			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
NMEW4T		0.00500	-0.00145	-1.86	0.00300	-0.00105	-1.47	OE
NNP2FW		0.00600	-0.00045	-0.58	0.00400	-0.00005	-0.07	DR
NWH9Y3		0.00667	0.00022	0.28	0.00420	0.00015	0.22	OE
P9MR8G		0.00640	-0.00005	-0.06	0.00380	-0.00025	-0.35	OE
PWD9DT		0.00600	-0.00045	-0.58	0.00300	-0.00105	-1.47	OE
QCMDK6		0.00620	-0.00025	-0.32	0.00380	-0.00025	-0.35	IC
QLCFV9		0.00540	-0.00105	-1.34	0.00283	-0.00121	-1.70	OE
QWVKUC		0.00497	-0.00148	-1.90	0.00237	-0.00168	-2.36	OE
RHRHRV		0.00523	-0.00122	-1.56	0.00350	-0.00055	-0.77	OE
RZC6FR	M	0.00650	0.00005	0.06	No Data Reported			OE
TQGLBH		0.00700	0.00055	0.71	0.00433	0.00029	0.40	OE
UWJW39	M	0.00233	-0.00412	-5.27	No Data Reported			GD
V68WMX	X	0.0157	0.00922	11.81	0.0123	0.00829	11.64	OE
VNMGTV		0.00667	0.00022	0.28	0.00430	0.00025	0.36	OE
W3FTFP		0.00633	-0.00012	-0.15	0.00433	0.00029	0.40	OE
WJ9CH7	*	0.00617	-0.00028	-0.36	0.00297	-0.00108	-1.52	OE
WRFXNL		0.00613	-0.00032	-0.40	0.00377	-0.00028	-0.39	IC
WVH2AG		0.00737	0.00092	1.18	0.00473	0.00069	0.96	OE
X23GDE		0.00623	-0.00022	-0.28	0.00367	-0.00038	-0.53	OE
XUD7YA		0.00627	-0.00018	-0.23	0.00367	-0.00038	-0.53	OE
XUFTH9	X	0.00632	-0.00013	-0.17	0.00386	-0.00018	-0.26	OE
Y6XY4X	X	0.00817	0.00172	2.20	0.00450	0.00045	0.64	AE
Y9ZB87		0.00703	0.00058	0.75	0.00500	0.00095	1.34	OE
YW68T4		0.00799	0.00154	1.98	0.00514	0.00109	1.54	OE
Z78WZ8		0.00650	0.00005	0.06	0.00417	0.00012	0.17	OE
ZV8944	M	No Data Reported			0.00468	0.00064	0.89	DR

Summary Statistics

	Sample		Sample L42	
Grand Means	0.00645	Percent	0.00405	Percent
Stnd Dev Btwn Labs	0.00078	Percent	0.00071	Percent

Samples , L42 : AISI 1018, A36

Statistics based on 62 of 73 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)	XX	Please Indicate Method Used for Current Element

Comments on Assigned Data Flags for Test #175

3BE3WP (X) - Inconsistent in testing between samples. Inconsistent within the determinations of both samples.

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

JUAZVG (M) - Participant did not submit data for sample L42.

RZC6FR (M) - Participant did not submit data for sample L42.

UWJW39 (M) - Participant did not submit data for sample L42.

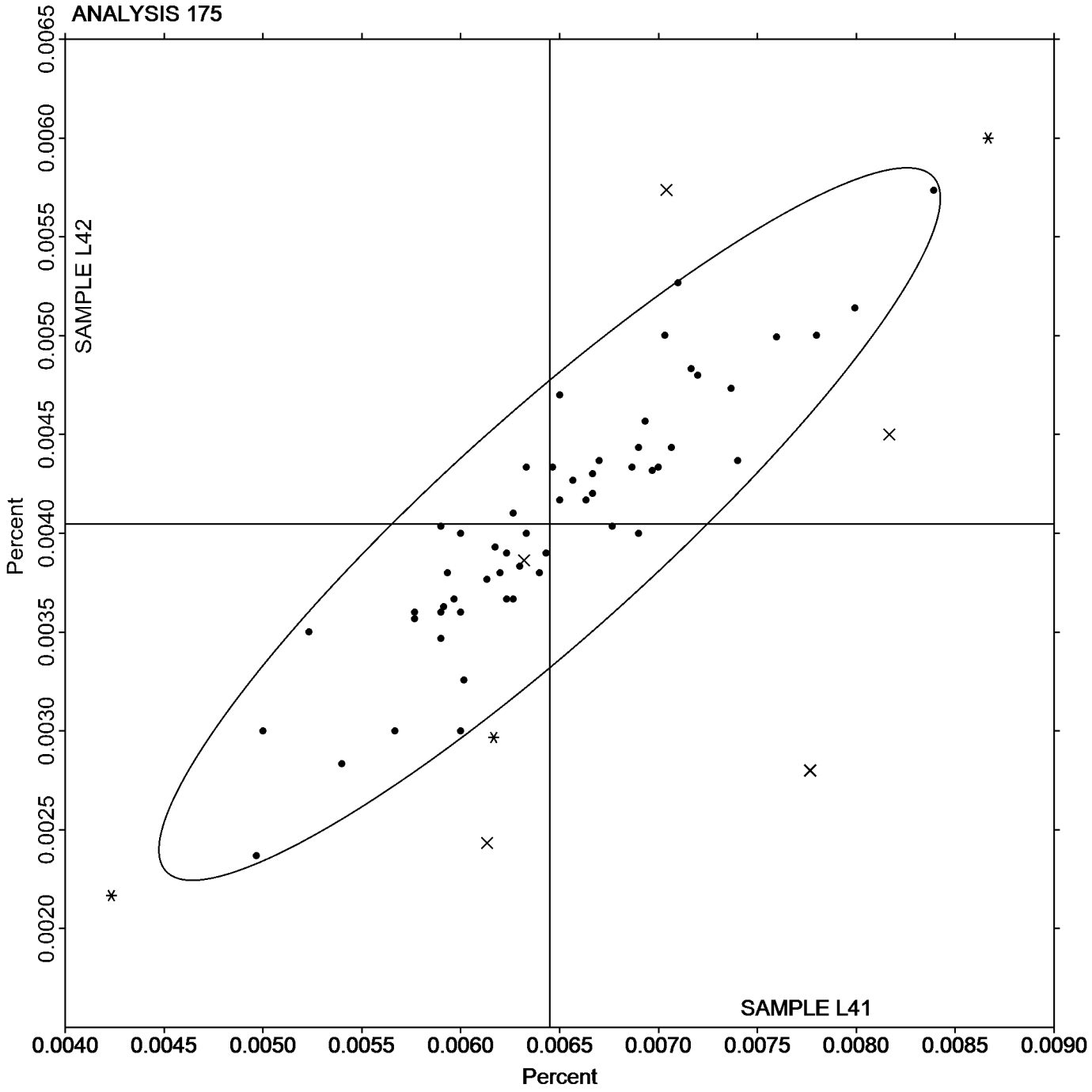
V68WMX (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of both samples.

XUFTH9 (X) - Data were submitted late. Results were consistent with the other laboratories.

Y6XY4X (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample L41.

ZV8944 (M) - Participant did not submit data for sample L41.

SAMPLE	SAMPLE L42
0.00645 Percent	0.00405 Percent



		Sample L41			Sample L42			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
28DWJ6		0.0760	0.0029	0.96	0.00937	0.00225	0.87	OE
2AG4PX		0.0711	-0.0020	-0.66	0.00557	-0.00155	-0.59	OE
2N4ULZ		0.0686	-0.0045	-1.51	0.00993	0.00282	1.08	OE
326AAV		0.0690	-0.0041	-1.37	0.00923	0.00212	0.81	OE
398UJY		0.0752	0.0021	0.70	0.00657	-0.00055	-0.21	OE
39KFX8		0.0732	0.0001	0.03	0.00820	0.00109	0.42	OE
39PVCT	X	0.0704	-0.0027	-0.90	0.00673	-0.00038	-0.15	OE
3BE3WP		0.0684	-0.0047	-1.56	0.00981	0.00270	1.04	OE
3U3PWJ		0.0666	-0.0065	-2.17	0.00833	0.00122	0.47	OE
3WBX4H		0.0728	-0.0003	-0.11	0.00620	-0.00092	-0.35	XX
3WN2LV		0.0700	-0.0031	-1.03	0.00563	-0.00148	-0.57	DC
4NAFDR		0.0763	0.0032	1.07	0.00333	-0.00378	-1.45	OE
66Y9UP		0.0720	-0.0011	-0.37	0.00800	0.00089	0.34	OE
6DUBYL		0.0710	-0.0021	-0.70	0.0117	0.00455	1.75	OE
6XZQAL		0.0750	0.0019	0.63	0.00600	-0.00111	-0.43	OE
7GNU8X	*	0.0720	-0.0011	-0.37	0.0140	0.00689	2.65	OE
7QAXDC	*	0.0800	0.0069	2.30	0.00450	-0.00261	-1.00	OE
7UC9KT	X	0.0873	0.0142	4.73	0.0190	0.01189	4.57	OE
8EDLTQ		0.0713	-0.0018	-0.62	0.00513	-0.00198	-0.76	IC
8M4UZF		0.0757	0.0026	0.85	0.00767	0.00055	0.21	OE
8WEWN2		0.0749	0.0018	0.59	0.0135	0.00639	2.45	OE
8WWFHU	M	0.0750	0.0019	0.64	No Data Reported			OE
8ZKD67		0.0680	-0.0051	-1.70	0.00533	-0.00178	-0.68	OE
A6LEVQ		0.0723	-0.0008	-0.26	0.00157	-0.00555	-2.13	OE
ACJ6G2		0.0750	0.0019	0.64	0.00777	0.00065	0.25	OE
AH7WNU		0.0727	-0.0004	-0.15	0.00400	-0.00311	-1.20	OE
ANU8QK		0.0742	0.0011	0.36	0.0133	0.00619	2.38	OE
BAQVJ6		0.0742	0.0011	0.36	0.00617	-0.00095	-0.36	OE
BDRRFQ		0.0700	-0.0031	-1.04	0.00567	-0.00145	-0.56	IC
BEHV37		0.0710	-0.0021	-0.70	0.00807	0.00095	0.37	OE
BHMJJG	*	0.0674	-0.0057	-1.90	0.00200	-0.00511	-1.96	OE
BPJVMK		0.0723	-0.0008	-0.28	0.00520	-0.00191	-0.73	GD
BZQTRU		0.0737	0.0006	0.18	0.00567	-0.00145	-0.56	OE
C7PEXH		0.0753	0.0022	0.73	0.00977	0.00265	1.02	OE
CRTNCX		0.0747	0.0016	0.52	0.00500	-0.00211	-0.81	OE
CTZ3GJ		0.0690	-0.0041	-1.37	0.00870	0.00159	0.61	OE
CVNJTC		0.0739	0.0008	0.26	0.00635	-0.00076	-0.29	OE
D4FCK3		0.0713	-0.0018	-0.59	0.00613	-0.00098	-0.38	IC
D9PFMX		0.0717	-0.0014	-0.48	0.00833	0.00122	0.47	OE
D9TXTA		0.0730	-0.0001	-0.04	0.00990	0.00279	1.07	XX
DMAZ67		0.0720	-0.0011	-0.37	0.00800	0.00089	0.34	XX
DTWXGZ	X	0.0733	0.0002	0.07	0.0227	0.01555	5.97	OE
E328NQ		0.0800	0.0069	2.29	0.0100	0.00289	1.11	OE
EK23BP		0.0777	0.0046	1.51	0.00533	-0.00178	-0.68	OE
EYFCWQ		0.0698	-0.0033	-1.11	0.00417	-0.00295	-1.13	IC
FDWPPC	X	0.0798	0.0067	2.23	0.0199	0.01282	4.92	OE
FLMZQE		0.0799	0.0068	2.27	0.00833	0.00122	0.47	OE

Fasteners and Metals Interlaboratory Testing Program

Analysis 176

Carbon & Low Alloy Steel, Element #7

NICKEL (Ni)

Cycle 117

1st Qtr 2017

		Sample L41			Sample L42			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
FZM8U3		0.0797	0.0066	2.18	0.00937	0.00225	0.87	OE
GEZ2KJ	X	0.0917	0.0186	6.17	0.0207	0.01355	5.21	OE
GYUH9L	*	0.0772	0.0041	1.36	0.0145	0.00739	2.84	OE
HTVBWB		0.0747	0.0016	0.52	0.00900	0.00189	0.73	OE
J4WGKN	M	0.0723	-0.0008	-0.26	No Data Reported			OE
JHF6UL		0.0737	0.0006	0.18	0.00600	-0.00111	-0.43	OE
JUAZVG		0.0683	-0.0048	-1.59	0.00547	-0.00165	-0.63	IC
JZCJ6K		0.0787	0.0056	1.85	0.00390	-0.00321	-1.23	OE
JZGPRA		0.0774	0.0043	1.43	0.0116	0.00446	1.71	OE
KG2666		0.0730	-0.0001	-0.04	0.00550	-0.00161	-0.62	OE
KML6GB		0.0740	0.0009	0.29	0.00600	-0.00111	-0.43	OE
KUMAG8	M	0.0612	-0.0119	-3.96	No Data Reported			GD
L22FT6		0.0733	0.0002	0.07	0.00763	0.00052	0.20	OE
LBQDBX		0.0690	-0.0041	-1.37	0.0110	0.00389	1.49	OE
LJYXKL		0.0745	0.0013	0.45	0.00386	-0.00325	-1.25	OE
LKBJ82		0.0707	-0.0024	-0.81	0.00740	0.00029	0.11	OE
MVTCJH		0.0724	-0.0007	-0.22	0.00555	-0.00157	-0.60	OE
N6VR99		0.0747	0.0016	0.53	0.00567	-0.00145	-0.56	OE
NKJ3VB		0.0675	-0.0056	-1.88	0.00503	-0.00208	-0.80	OE
NMEW4T		0.0720	-0.0011	-0.37	0.00500	-0.00211	-0.81	OE
NNP2FW		0.0730	-0.0001	-0.04	0.00500	-0.00211	-0.81	DR
NQVL4W		0.0727	-0.0004	-0.15	0.0103	0.00322	1.24	OE
NWH9Y3		0.0730	-0.0001	-0.04	0.00487	-0.00225	-0.86	OE
P6P7KK		0.0717	-0.0014	-0.48	0.00233	-0.00478	-1.84	GD
P9MR8G		0.0751	0.0020	0.67	0.00547	-0.00165	-0.63	OE
PAKWTG	M	0.0533	-0.0198	-6.58	No Data Reported			GD
PKJX2E	X	0.0907	0.0176	5.84	0.0357	0.02855	10.97	OE
PWD9DT		0.0720	-0.0011	-0.37	0.0120	0.00489	1.88	OE
QCMDK6		0.0730	-0.0001	-0.04	0.00693	-0.00018	-0.07	IC
QLCFV9	X	0.4893	0.4162	138.48	0.0173	0.01022	3.93	OE
QWVKUC		0.0721	-0.0010	-0.34	0.00843	0.00132	0.51	OE
QX6MHW		0.0713	-0.0018	-0.59	0.00417	-0.00295	-1.13	IC
RBQENH		0.0780	0.0049	1.63	0.00627	-0.00085	-0.32	GD
RHRHRV		0.0799	0.0068	2.25	0.00753	0.00042	0.16	OE
RZC6FR	X	0.0784	0.0053	1.76	0.0184	0.01129	4.33	OE
T2B6M3		0.0753	0.0022	0.74	0.00630	-0.00081	-0.31	OE
TQGLBH		0.0693	-0.0038	-1.26	0.00667	-0.00045	-0.17	OE
ULJFFD		0.0723	-0.0008	-0.26	0.00717	0.00005	0.02	OE
UWJW39		0.0720	-0.0011	-0.37	0.00333	-0.00378	-1.45	GD
V68WMX	X	0.0887	0.0156	5.17	0.0147	0.00755	2.90	OE
VNMGTV		0.0767	0.0036	1.18	0.00600	-0.00111	-0.43	OE
VQQ82V	M	0.0710	-0.0021	-0.70	No Data Reported			OE
W3FTFP		0.0740	0.0009	0.29	0.00833	0.00122	0.47	OE
WAHVQG		0.0717	-0.0014	-0.46	0.00867	0.00155	0.60	DR
WJ9CH7		0.0720	-0.0011	-0.37	0.00633	-0.00078	-0.30	OE
WQ3JZC		0.0726	-0.0005	-0.18	0.00893	0.00182	0.70	OE
WRFXNL		0.0733	0.0002	0.07	0.00807	0.00095	0.37	IC

Fasteners and Metals Interlaboratory Testing Program

Analysis 176

Carbon & Low Alloy Steel, Element #7

NICKEL (Ni)

Cycle 117
1st Qtr 2017

WebCode	Data Flag	Sample L41 Lab Mean	Sample L41 Diff. from Grand Mean	Sample L41 CPV	Sample L42 Lab Mean	Sample L42 Diff. from Grand Mean	Sample L42 CPV	Method
WVH2AG		0.0703	-0.0028	-0.95	0.00570	-0.00141	-0.54	OE
X23GDE		0.0737	0.0006	0.18	0.00507	-0.00205	-0.79	OE
XCGHV6		0.0713	-0.0018	-0.59	0.00700	-0.00011	-0.04	OE
XGB6FZ		0.0716	-0.0015	-0.49	0.0101	0.00302	1.16	OE
XUD7YA		0.0743	0.0012	0.41	0.00527	-0.00185	-0.71	OE
XUFTH9	X	0.0723	-0.0008	-0.28	0.00513	-0.00198	-0.76	OE
XX388H	X	0.0620	-0.0111	-3.70	0.00100	-0.00611	-2.35	GD
Y6XY4X	X	0.00685	-0.0663	-22.05	0.00233	-0.00478	-1.84	AE
Y9ZB87		0.0705	-0.0026	-0.86	0.00793	0.00082	0.32	OE
YQ32CF		0.0720	-0.0011	-0.37	0.00640	-0.00071	-0.27	OE
YW68T4		0.0768	0.0037	1.24	0.00919	0.00207	0.80	OE
Z78WZ8		0.0734	0.0003	0.09	0.00570	-0.00141	-0.54	OE
ZV8944		0.0766	0.0035	1.16	0.00583	-0.00128	-0.49	DR
ZV897P		0.0730	-0.0001	-0.04	0.00600	-0.00111	-0.43	OE

Summary Statistics

	Sample L41		Sample L42	
Grand Means	0.0731	Percent	0.00711	Percent
Stnd Dev Btwn Labs	0.0030	Percent	0.00260	Percent

Samples L41, L42 : AISI 1018, A36

Statistics based on 91 of 108 reporting participants

Key to Method Codes Reported by Participants

AE	Spectrometry - Atomic Emission (AES)	DC	Spectrometry - DC Plasma (DCP)
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 #176

39PVCT (X) - Data were submitted late. Results were consistent with the other laboratories.

7UC9KT (X) - Data for both samples are high.

8WWFHU (M) - Participant did not submit data for sample L42.

DTWXGZ (X) - Data for sample L42 are high.

FDWPPC (X) - Data for sample L42 are high.

GEZ2KJ (X) - Data for both samples are high.

J4WGKN (M) - Participant did not submit data for sample L42.

KUMAG8 (M) - Participant did not submit data for sample L42.

PAKWTG (M) - Participant did not submit data for sample L42.

PKJX2E (X) - Data for both samples are high. Inconsistent within the determinations of both samples.

QLCFV9 (X) - Data for both samples are high. Inconsistent within the determinations of both samples.

RZC6FR (X) - Data for sample L42 are high.

V68WMX (X) - Data for both samples are high.

VQQ82V (M) - Participant did not submit data for sample L42.

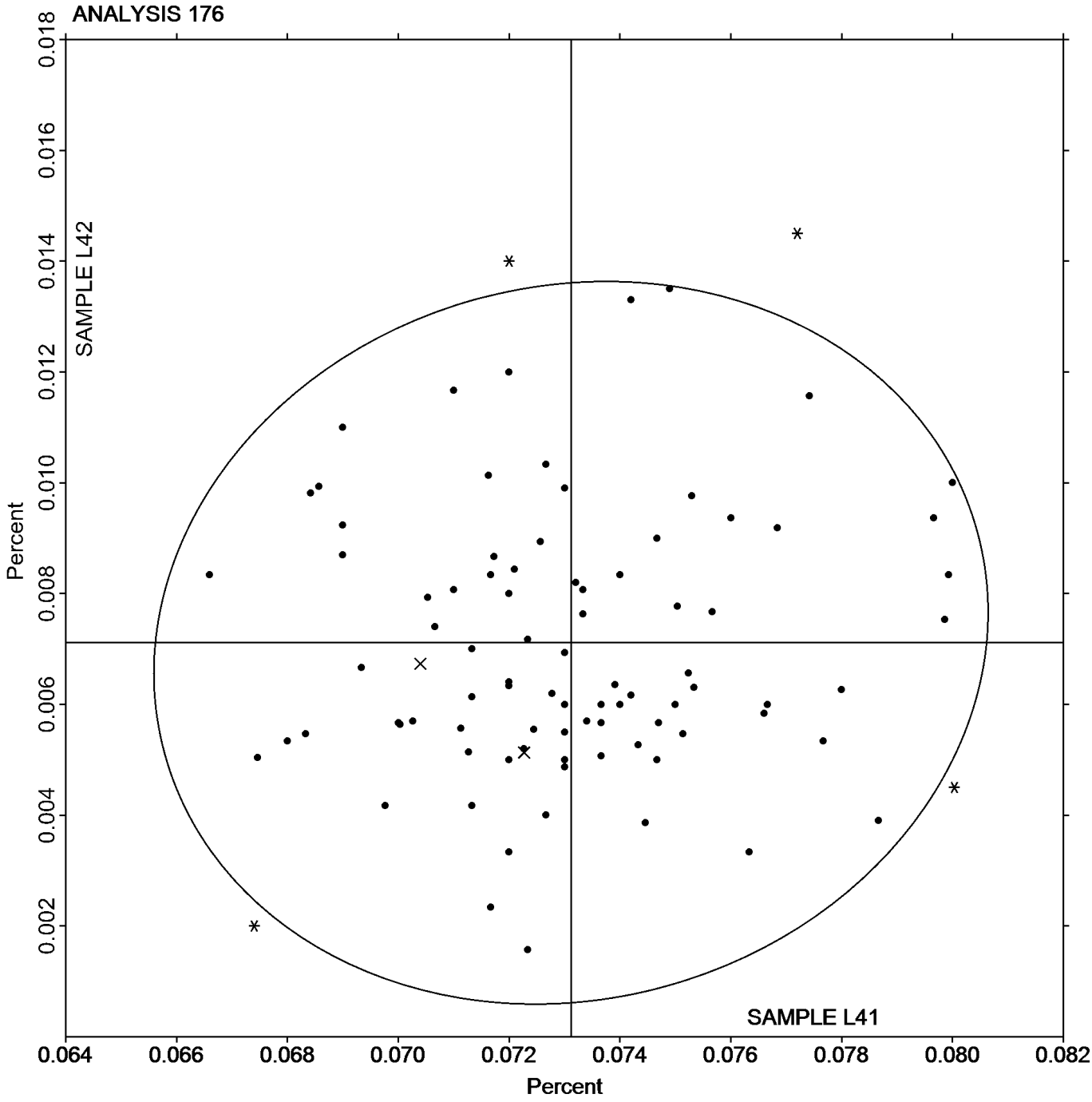
XUFTH9 (X) - Data were submitted late. Results were consistent with the other laboratories.

XX388H (X) - Data for sample L41 are low.

Y6XY4X (X) - Data for sample L41 are low.

SAMPLE L41
0.0731 Percent

SAMPLE L42
0.00711 Percent



		Sample L41			Sample L42			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
28DWJ6		0.1397	0.0017	0.43	0.00823	-0.0021	-0.92	OE
2AG4PX		0.1407	0.0027	0.68	0.00963	-0.0007	-0.31	OE
2N4ULZ		0.1370	-0.0010	-0.24	0.0117	0.0014	0.59	OE
326AAV		0.1397	0.0017	0.43	0.0145	0.0041	1.79	OE
398UJY		0.1360	-0.0020	-0.49	0.0124	0.0021	0.91	OE
39KFX8		0.1375	-0.0005	-0.12	0.0102	-0.0001	-0.06	OE
39PVCT	X	0.1393	0.0014	0.34	0.00853	-0.0018	-0.79	OE
3BE3WP		0.1375	-0.0005	-0.13	0.0111	0.0008	0.34	OE
3U3PWJ		0.1394	0.0015	0.37	0.00887	-0.0015	-0.64	OE
3WBX4H		0.1384	0.0004	0.11	0.0128	0.0025	1.08	XX
3WN2LV		0.1300	-0.0080	-1.99	0.00883	-0.0015	-0.66	DC
4NAFDR		0.1330	-0.0050	-1.24	0.0120	0.0017	0.72	OE
66Y9UP		0.1373	-0.0006	-0.16	0.00950	-0.0008	-0.37	IC
6DUBYL		0.1427	0.0047	1.18	0.00697	-0.0034	-1.47	OE
6XZQAL		0.1337	-0.0043	-1.07	0.0110	0.0007	0.28	OE
7GNU8X	X	0.1500	0.0120	3.01	0.0143	0.0040	1.73	OE
7QAXDC		0.1353	-0.0026	-0.66	0.0131	0.0028	1.20	OE
7UC9KT		0.1377	-0.0003	-0.07	0.0140	0.0037	1.59	OE
8EDLTQ		0.1381	0.0002	0.04	0.00740	-0.0029	-1.28	IC
8M4UZF		0.1360	-0.0020	-0.49	0.0110	0.0007	0.28	OE
8WEWN2		0.1338	-0.0041	-1.03	0.0108	0.0004	0.18	OE
8WWFHU		0.1382	0.0002	0.06	0.0104	0.0000	0.01	OE
8ZKD67		0.1417	0.0037	0.93	0.00500	-0.0053	-2.32	OE
A6LEVQ		0.1373	-0.0006	-0.16	0.00863	-0.0017	-0.74	OE
ACJ6G2		0.1329	-0.0051	-1.28	0.00870	-0.0016	-0.71	OE
AH7WNU		0.1463	0.0084	2.09	0.0117	0.0013	0.57	OE
ANU8QK		0.1322	-0.0057	-1.43	0.0148	0.0044	1.92	OE
BAQVJ6	*	0.1410	0.0031	0.77	0.0160	0.0056	2.44	OE
BDRRFQ		0.1377	-0.0003	-0.07	0.0100	-0.0003	-0.15	OE
BEHV37		0.1423	0.0044	1.09	0.00843	-0.0019	-0.83	OE
BHMJJG		0.1337	-0.0043	-1.07	0.0150	0.0047	2.02	OE
BPJVMK		0.1349	-0.0031	-0.77	0.00580	-0.0045	-1.97	GD
BZQTRU		0.1367	-0.0013	-0.32	0.0113	0.0009	0.40	OE
C7PEXH		0.1372	-0.0008	-0.20	0.0111	0.0008	0.33	OE
CRTNCX		0.1397	0.0017	0.43	0.0113	0.0009	0.40	OE
CTZ3GJ		0.1320	-0.0060	-1.49	0.0140	0.0037	1.59	OE
CVNJTC		0.1358	-0.0022	-0.55	0.0118	0.0015	0.63	OE
D4FCK3		0.1380	0.0000	0.01	0.00880	-0.0015	-0.67	IC
D9PFMX		0.1370	-0.0010	-0.24	0.0100	-0.0003	-0.15	OE
D9TXTA		0.1380	0.0000	0.01	0.0120	0.0017	0.72	XX
DMAZ67		0.1357	-0.0023	-0.57	0.0100	-0.0003	-0.15	XX
DTWXGZ	X	0.0480	-0.0900	-22.50	0.0380	0.0277	12.00	OE
E328NQ		0.1407	0.0027	0.68	0.0110	0.0007	0.28	OE
EK23BP		0.1343	-0.0036	-0.91	0.0100	-0.0003	-0.15	OE
EYFCWQ		0.1387	0.0007	0.18	0.00913	-0.0012	-0.53	IC
FDWPPC	X	0.1234	-0.0146	-3.64	0.0126	0.0023	0.99	OE
FLMZQE		0.1360	-0.0020	-0.49	0.00907	-0.0013	-0.56	OE

		Sample L41			Sample L42			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
FZM8U3	*	0.1473	0.0094	2.34	0.0123	0.0020	0.86	OE
GEZ2KJ	*	0.1493	0.0114	2.84	0.00927	-0.0011	-0.47	OE
GYUH9L	*	0.1386	0.0006	0.16	0.0164	0.0061	2.64	OE
HTVBWB	*	0.1470	0.0090	2.26	0.0130	0.0027	1.15	OE
J4WGKN		0.1377	-0.0003	-0.07	0.00800	-0.0023	-1.02	OE
JHF6UL		0.1427	0.0047	1.18	0.00767	-0.0027	-1.16	OE
JUAZVG		0.1327	-0.0053	-1.33	0.00897	-0.0014	-0.60	IC
JZCJ6K		0.1360	-0.0020	-0.49	0.0107	0.0003	0.14	OE
JZGPRA		0.1390	0.0011	0.27	0.0142	0.0038	1.67	OE
KG2666		0.1348	-0.0032	-0.80	0.0122	0.0019	0.80	OE
KML6GB		0.1370	-0.0010	-0.24	0.0116	0.0013	0.54	OE
KUMAG8	*	0.1487	0.0107	2.68	0.0100	-0.0003	-0.15	GD
L22FT6		0.1373	-0.0006	-0.16	0.0101	-0.0002	-0.09	OE
LBQDBX	*	0.1280	-0.0100	-2.49	0.0150	0.0047	2.02	OE
LJYXKL		0.1354	-0.0026	-0.64	0.00996	-0.0004	-0.17	OE
LKBJ82		0.1390	0.0010	0.26	0.00987	-0.0005	-0.21	OE
MVTCJH		0.1346	-0.0034	-0.85	0.00942	-0.0009	-0.40	OE
N6VR99		0.1380	0.0000	0.01	0.0112	0.0008	0.36	OE
NKJ3VB		0.1420	0.0040	1.01	0.00920	-0.0011	-0.50	OE
NMEW4T		0.1417	0.0037	0.93	0.0103	0.0000	-0.01	OE
NNP2FW		0.1340	-0.0040	-0.99	0.0120	0.0017	0.72	DR
NQVL4W		0.1353	-0.0026	-0.66	0.00900	-0.0013	-0.58	OE
NWH9Y3		0.1407	0.0027	0.68	0.0100	-0.0003	-0.15	OE
P6P7KK		0.1360	-0.0020	-0.49	0.00900	-0.0013	-0.58	GD
P8UYEJ	X	0.1375	-0.0005	-0.12	0.2181	0.2077	90.16	WD
P9MR8G		0.1423	0.0043	1.08	0.00677	-0.0036	-1.55	OE
PAKWTG	X	0.1340	-0.0040	-0.99	0.00200	-0.0083	-3.62	GD
PKJX2E	X	0.1317	-0.0063	-1.58	0.0377	0.0273	11.86	OE
PWD9DT	M	0.1340	-0.0040	-0.99	No Data Reported			OE
QCMDK6		0.1370	-0.0010	-0.24	0.00673	-0.0036	-1.57	IC
QLCFV9	*	0.1387	0.0007	0.18	0.00440	-0.0059	-2.58	OE
QWVKUC		0.1342	-0.0038	-0.94	0.00757	-0.0028	-1.21	OE
QX6MHW		0.1393	0.0014	0.34	0.00907	-0.0013	-0.56	IC
RBQENH		0.1397	0.0017	0.43	0.00963	-0.0007	-0.31	GD
RHRHRV		0.1371	-0.0009	-0.22	0.0120	0.0017	0.72	OE
RZC6FR		0.1346	-0.0034	-0.84	0.00830	-0.0020	-0.89	OE
T2B6M3		0.1380	0.0000	0.01	0.00620	-0.0041	-1.80	OE
TQGLBH		0.1397	0.0017	0.43	0.0130	0.0027	1.15	OE
UHZKCK		0.1360	-0.0020	-0.49	0.00813	-0.0022	-0.96	OE
ULJFFD		0.1447	0.0067	1.68	0.00877	-0.0016	-0.69	OE
UWJW39		0.1367	-0.0013	-0.32	0.0100	-0.0003	-0.15	GD
V68WMX	X	0.1627	0.0247	6.18	0.0200	0.0097	4.19	OE
VNMGTV		0.1373	-0.0006	-0.16	0.0117	0.0013	0.57	OE
VQQ82V		0.1363	-0.0016	-0.41	0.0134	0.0031	1.33	OE
W3FTFP		0.1300	-0.0080	-1.99	0.00900	-0.0013	-0.58	OE
WAHVQG		0.1383	0.0004	0.09	0.00957	-0.0008	-0.34	DR
WJ9CH7	*	0.1487	0.0107	2.68	0.0110	0.0007	0.28	OE

Fasteners and Metals Interlaboratory Testing Program

Analysis 177

Carbon & Low Alloy Steel, Element #8
CHROMIUM (Cr)

Cycle 117
1st Qtr 2017

		Sample L41			Sample L42			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
WQ3JZC		0.1353	-0.0026	-0.66	0.0106	0.0003	0.12	OE
WRFXNL		0.1403	0.0024	0.59	0.00873	-0.0016	-0.70	IC
WVH2AG		0.1403	0.0023	0.58	0.0117	0.0014	0.59	OE
X23GDE		0.1387	0.0007	0.18	0.0130	0.0026	1.14	OE
XCGHV6	X	0.1223	-0.0156	-3.91	0.0133	0.0030	1.30	OE
XGB6FZ		0.1340	-0.0040	-0.99	0.0104	0.0001	0.04	OE
XUD7YA		0.1383	0.0004	0.09	0.0111	0.0008	0.33	OE
XUFTH9	X	0.1379	-0.0001	-0.03	0.0135	0.0032	1.37	OE
XX388H		0.1410	0.0030	0.76	0.0120	0.0017	0.72	GD
Y6XY4X		0.1353	-0.0026	-0.66	0.00800	-0.0023	-1.02	AE
Y9ZB87		0.1373	-0.0007	-0.17	0.00977	-0.0006	-0.25	OE
YQ32CF		0.1437	0.0057	1.43	0.0100	-0.0003	-0.14	OE
YW68T4		0.1347	-0.0032	-0.80	0.00740	-0.0029	-1.28	OE
Z78WZ8		0.1354	-0.0026	-0.65	0.0114	0.0011	0.46	OE
ZV8944		0.1457	0.0077	1.94	0.00963	-0.0007	-0.31	DR
ZV897P		0.1360	-0.0020	-0.49	0.00800	-0.0023	-1.02	OE

Summary Statistics

	Sample L41		Sample L42	
Grand Means	0.1380	Percent	0.0103	Percent
Stnd Dev Btwn Labs	0.0040	Percent	0.0023	Percent

Samples L41, L42 : AISI 1018, A36

Statistics based on 99 of 110 reporting participants

Key to Method Codes Reported by Participants

AE	Spectrometry - Atomic Emission (AES)	DC	Spectrometry - DC Plasma (DCP)
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 #177

39PVCT (X) - Data were submitted late. Results were consistent with the other laboratories.

7GNU8X (X) - Data for sample L41 are high. Inconsistent within the determinations of sample L42.

DTWXGZ (X) - Data for sample L41 are low and data for sample L42 are high.

FDWPPC (X) - Data for sample L41 are low. Inconsistent within the determinations of sample L41.

P8UYEJ (X) - Data for sample L42 are high. Inconsistent within the determinations of sample L42.

PAKWTG (X) - Data for sample L42 are low.

PKJX2E (X) - Data for sample L42 are high. Inconsistent within the determinations of sample L42.

PWD9DT (M) - Participant did not submit data for sample L42.

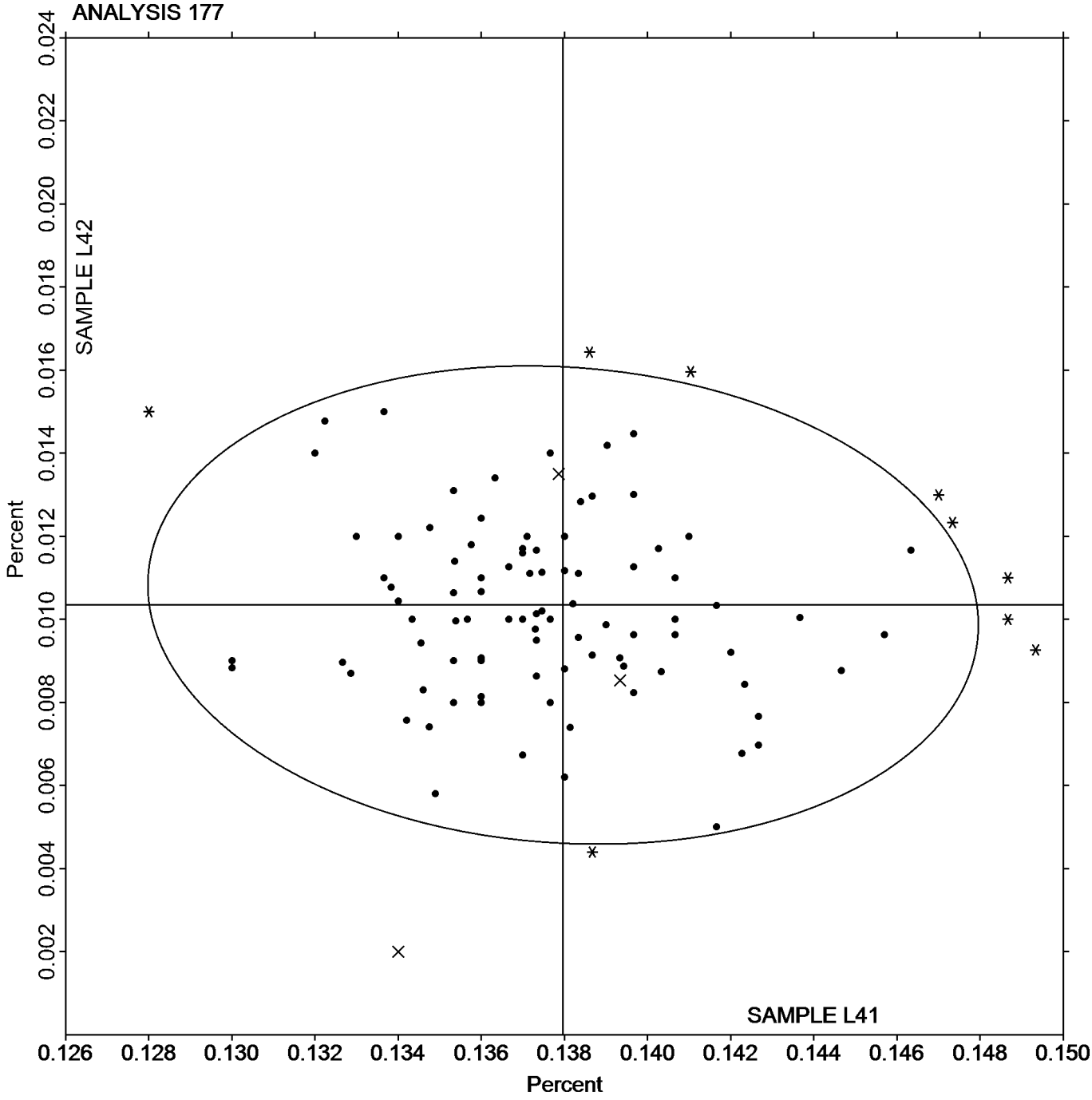
V68WMX (X) - Data for both samples are high.

XCGHV6 (X) - Data for sample L41 are low.

XUFTH9 (X) - Data were submitted late. Results were consistent with the other laboratories.

SAMPLE L41
0.1380 Percent

SAMPLE L42
0.0103 Percent



		Sample L41			Sample L42			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
28DWJ6	X	0.00587	0.00353	4.51	0.00543	0.00362	4.89	OE
2AG4PX		0.00197	-0.00037	-0.48	0.00133	-0.00048	-0.64	OE
2N4ULZ		0.00303	0.00069	0.89	0.00317	0.00136	1.83	OE
326AAV		0.00167	-0.00067	-0.86	0.00180	-0.00001	-0.01	OE
398UJY		0.00207	-0.00027	-0.35	0.00140	-0.00041	-0.55	OE
39KFX8		0.00290	0.00056	0.72	0.00233	0.00052	0.71	OE
39PVCT	X	0.00267	0.00033	0.42	0.00233	0.00052	0.71	OE
3BCCNL		0.00387	0.00153	1.96	0.00333	0.00152	2.06	DR
3BE3WP		0.00261	0.00027	0.35	0.00196	0.00015	0.20	OE
3U3PWJ		0.00213	-0.00021	-0.26	0.00147	-0.00034	-0.46	OE
3WBX4H		0.00317	0.00083	1.07	0.00244	0.00063	0.85	XX
3WN2LV		0.00054	-0.00180	-2.30	0.00050	-0.00131	-1.77	DC
4NAFDR		0.00100	-0.00134	-1.71	0.00100	-0.00081	-1.09	OE
66Y9UP		0.00177	-0.00057	-0.73	0.00123	-0.00058	-0.78	IC
6DUBYL		0.00147	-0.00087	-1.12	0.00103	-0.00078	-1.05	OE
6XZQAL		0.00200	-0.00034	-0.43	0.00200	0.00019	0.26	OE
7GNU8X		0.00300	0.00066	0.85	0.00200	0.00019	0.26	OE
7UC9KT		0.00303	0.00069	0.89	0.00290	0.00109	1.47	OE
8M4UZF		0.00237	0.00003	0.04	0.00173	-0.00008	-0.10	OE
8WEWN2		0.00203	-0.00031	-0.39	0.00163	-0.00018	-0.24	OE
8ZKD67		0.00200	-0.00034	-0.43	0.00233	0.00052	0.71	OE
A6LEVQ		0.00203	-0.00031	-0.39	0.00143	-0.00038	-0.51	OE
ACJ6G2		0.00187	-0.00047	-0.60	0.00110	-0.00071	-0.96	OE
AH7WNU		0.00400	0.00166	2.13	0.00300	0.00119	1.61	OE
ANU8QK	X	0.00543	0.00309	3.96	0.00387	0.00206	2.78	OE
BAQVJ6		0.00307	0.00073	0.93	0.00263	0.00082	1.11	OE
BHMJJG		0.00153	-0.00081	-1.03	0.00127	-0.00054	-0.73	OE
BPJVMK		0.00140	-0.00094	-1.20	0.00073	-0.00108	-1.45	GD
BZQTRU		0.00153	-0.00081	-1.03	0.00103	-0.00078	-1.05	OE
C7PEXH	*	0.00443	0.00209	2.68	0.00393	0.00212	2.87	OE
CRTNCX	X	0.00217	-0.00017	-0.22	0.00290	0.00109	1.47	OE
CTZ3GJ	X	0.00583	0.00349	4.47	0.00583	0.00402	5.43	OE
D4FCK3		0.00290	0.00056	0.72	0.00237	0.00056	0.75	IC
D9PFMX		0.00367	0.00133	1.70	0.00333	0.00152	2.06	OE
DMAZ67		0.00200	-0.00034	-0.43	0.00200	0.00019	0.26	XX
E328NQ		0.00233	-0.00001	-0.01	0.00200	0.00019	0.26	OE
EK23BP		0.00200	-0.00034	-0.43	0.00100	-0.00081	-1.09	OE
EYFCWQ		0.00260	0.00026	0.33	0.00153	-0.00028	-0.37	IC
FLMZQE		0.00277	0.00043	0.55	0.00207	0.00026	0.35	OE
FZM8U3		0.00240	0.00006	0.08	0.00173	-0.00008	-0.10	OE
GEZ2KJ		0.00163	-0.00071	-0.90	0.00097	-0.00084	-1.14	OE
GYUH9L	X	0.00540	0.00306	3.92	0.00493	0.00312	4.22	OE
HTVBWB		0.00110	-0.00124	-1.58	0.00100	-0.00081	-1.09	OE
J4WGKN		0.00200	-0.00034	-0.43	0.00200	0.00019	0.26	OE
JHF6UL		0.00240	0.00006	0.08	0.00187	0.00006	0.08	OE
JUAZVG		0.00190	-0.00044	-0.56	0.00160	-0.00021	-0.28	IC
JZCJ6K		0.00300	0.00066	0.85	0.00253	0.00072	0.98	OE

		Sample L41			Sample L42			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
JZGPRA		0.00358	0.00124	1.59	0.00293	0.00112	1.51	OE
KG2666		0.00340	0.00106	1.36	0.00230	0.00049	0.66	OE
KML6GB		0.00223	-0.00011	-0.13	0.00170	-0.00011	-0.15	OE
L22FT6		0.00243	0.00009	0.12	0.00183	0.00002	0.03	OE
LBQDBX		0.00300	0.00066	0.85	0.00200	0.00019	0.26	OE
LJYXKL		0.00198	-0.00036	-0.45	0.00138	-0.00043	-0.58	OE
LKBJ82		0.00103	-0.00131	-1.67	0.00041	-0.00140	-1.89	OE
MVTCJH		0.00168	-0.00066	-0.84	0.00056	-0.00125	-1.68	OE
N6VR99		0.00203	-0.00031	-0.39	0.00150	-0.00031	-0.42	OE
NKJ3VB		0.00243	0.00009	0.12	0.00253	0.00072	0.98	OE
NMEW4T		0.00180	-0.00054	-0.69	0.00080	-0.00101	-1.36	OE
NNP2FW	X	0.00500	0.00266	3.41	0.00467	0.00286	3.86	DR
NQVL4W		0.00333	0.00099	1.27	0.00267	0.00086	1.16	OE
NWH9Y3		0.00287	0.00053	0.68	0.00217	0.00036	0.48	OE
P6P7KK		0.00200	-0.00034	-0.43	0.00100	-0.00081	-1.09	GD
P9MR8G		0.00193	-0.00041	-0.52	0.00137	-0.00044	-0.60	OE
PAKWTG		0.00300	0.00066	0.85	0.00200	0.00019	0.26	GD
QCMDK6		0.00163	-0.00071	-0.90	0.00170	-0.00011	-0.15	IC
QLCFV9		0.00100	-0.00134	-1.71	0.00100	-0.00081	-1.09	OE
QWVKUC		0.00263	0.00029	0.38	0.00197	0.00016	0.21	OE
RBQENH		0.00253	0.00019	0.25	0.00193	0.00012	0.17	GD
RHRHRV		0.00277	0.00043	0.55	0.00173	-0.00008	-0.10	OE
RZC6FR		0.00220	-0.00014	-0.18	0.00180	-0.00001	-0.01	OE
T2B6M3		0.00173	-0.00061	-0.77	0.00100	-0.00081	-1.09	OE
TQGLBH	M	0.00100	-0.00134	-1.71	No Data Reported			OE
V68WMX		0.00233	-0.00001	-0.01	0.00100	-0.00081	-1.09	OE
VNMGTV		0.00200	-0.00034	-0.43	0.00200	0.00019	0.26	OE
W3FTFP		0.00300	0.00066	0.85	0.00167	-0.00014	-0.19	OE
WAHVQG		0.00280	0.00046	0.59	0.00267	0.00086	1.16	DR
WJ9CH7		0.00147	-0.00087	-1.12	0.00093	-0.00088	-1.18	OE
WVH2AG		0.00180	-0.00054	-0.69	0.00180	-0.00001	-0.01	OE
X23GDE		0.00243	0.00009	0.12	0.00180	-0.00001	-0.01	OE
XCGHV6	X	0.00900	0.00666	8.52	0.00833	0.00652	8.81	OE
XGB6FZ		0.00337	0.00103	1.32	0.00263	0.00082	1.11	OE
XUD7YA		0.00127	-0.00107	-1.37	0.00140	-0.00041	-0.55	OE
XUFTH9	X	0.00403	0.00169	2.16	0.00290	0.00109	1.47	OE
XX388H	X	0.00800	0.00566	7.24	0.00300	0.00119	1.61	GD
Y6XY4X	M	0.00100	-0.00134	-1.71	No Data Reported			AE
YW68T4		0.00412	0.00178	2.28	0.00340	0.00159	2.14	OE
Z78WZ8		0.00303	0.00069	0.89	0.00240	0.00059	0.80	OE
ZV8944		0.00163	-0.00071	-0.90	0.00097	-0.00084	-1.14	DR
ZV897P		0.00237	0.00003	0.04	0.00173	-0.00008	-0.10	OE

Summary Statistics

	Sample L41		Sample L42	
Grand Means	0.00234	Percent	0.00181	Percent
Stnd Dev Btwn Labs	0.00078	Percent	0.00074	Percent

Samples L41, L42 : AISI 1018, A36

Statistics based on 77 of 89 reporting participants

Key to Method Codes Reported by Participants

AE	Spectrometry - Atomic Emission (AES)	DC	Spectrometry - DC Plasma (DCP)
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 #178

28DWJ6 (X) - Data for both samples are high. Possible Systematic Error.

39PVCT (X) - Data were submitted late. Results were consistent with the other laboratories.

ANU8QK (X) - Data for both samples are high. Possible Systematic Error.

CRTNCX (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample L42.

CTZ3GJ (X) - Data for both samples are high. Possible Systematic Error.

GYUH9L (X) - Data for both samples are high. Possible Systematic Error.

NNP2FW (X) - Data for both samples are high. Possible Systematic Error.

TQGLBH (M) - Participant did not submit data for sample L42.

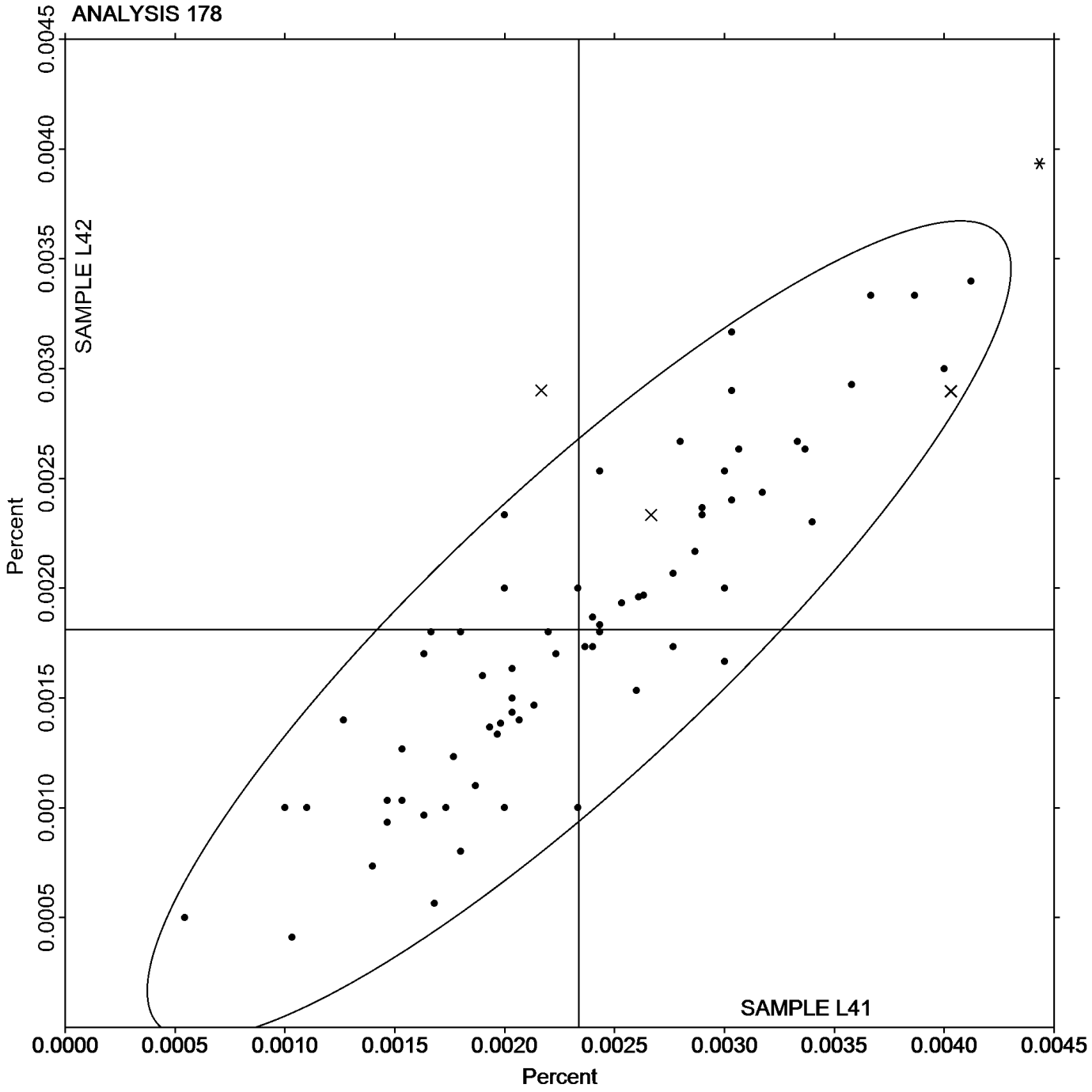
XCGHV6 (X) - Data for both samples are high. Possible Systematic Error.

XUFTH9 (X) - Data were submitted late. Results were consistent with the other laboratories.

XX388H (X) - Data for sample L41 are high.

Y6XY4X (M) - Participant did not submit data for sample L42.

SAMPLE L41	SAMPLE L42
0.00234 Percent	0.00181 Percent



Fasteners and Metals Interlaboratory Testing Program

Analysis 179

Carbon & Low Alloy Steel, Element #10
TUNGSTEN (W)

		Sample L41			Sample L42			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
28DWJ6		0.00250	-0.00040	-0.20	0.00153	-0.00036	-0.22	OE
2N4ULZ		0.00643	0.00354	1.80	0.00547	0.00358	2.25	OE
398UJY	M	0.00107	-0.00183	-0.93	No Data Reported			OE
3U3PWJ		0.00100	-0.00190	-0.97	0.00100	-0.00089	-0.56	OE
3WBX4H		0.00221	-0.00069	-0.35	0.00107	-0.00082	-0.51	XX
8WEWN2		0.00313	0.00024	0.12	0.00120	-0.00069	-0.43	OE
8ZKD67		0.00400	0.00110	0.56	0.00200	0.00011	0.07	OE
ACJ6G2		0.00143	-0.00146	-0.74	0.00013	-0.00176	-1.11	OE
ANU8QK	*	0.00833	0.00544	2.77	0.00513	0.00324	2.04	OE
BZQTRU		0.00107	-0.00183	-0.93	0.00040	-0.00149	-0.94	OE
DMAZ67		0.00500	0.00210	1.07	0.00500	0.00311	1.96	XX
EK23BP		0.00033	-0.00256	-1.31	0.00033	-0.00156	-0.98	OE
EYFCWQ		0.00253	-0.00036	-0.18	0.00167	-0.00022	-0.14	IC
FLMZQE		0.00273	-0.00016	-0.08	0.00183	-0.00006	-0.04	OE
FZM8U3		0.00387	0.00097	0.50	0.00203	0.00014	0.09	OE
JUAZVG	M	0.00103	-0.00186	-0.95	No Data Reported			IC
JZCJ6K		0.00127	-0.00163	-0.83	0.00100	-0.00089	-0.56	OE
JZGPRA	X	0.2436	0.24068	122.64	0.2408	0.23889	150.35	OE
KML6GB		0.00220	-0.00070	-0.35	0.00017	-0.00172	-1.08	OE
L22FT6		0.00360	0.00070	0.36	0.00150	-0.00039	-0.24	OE
LBQDBX		0.00400	0.00110	0.56	0.00300	0.00111	0.70	OE
N6VR99	M	0.00217	-0.00073	-0.37	No Data Reported			OE
NMEW4T		0.00400	0.00110	0.56	0.00200	0.00011	0.07	OE
QLCFV9	X	0.00990	0.00700	3.57	0.0158	0.01394	8.78	OE
RHRHRV	X	0.0223	0.01940	9.89	0.0190	0.01708	10.75	OE
TQGLBH	X	0.0390	0.03610	18.40	0.0377	0.03578	22.52	OE
W3FTFP		0.00367	0.00077	0.39	0.00333	0.00144	0.91	OE
WVH2AG		0.00001	-0.00289	-1.47	0.00057	-0.00132	-0.83	OE
X23GDE		0.00357	0.00067	0.34	0.00133	-0.00056	-0.35	OE
XUFTH9	X	0.00455	0.00165	0.84	0.00205	0.00016	0.10	OE
Y9ZB87		0.00250	-0.00040	-0.20	0.00353	0.00164	1.03	OE
YW68T4		0.00010	-0.00280	-1.42	0.00010	-0.00179	-1.13	OE

Summary Statistics

	Sample L41		Sample L42	
Grand Means	0.00290	Percent	0.00189	Percent
Stnd Dev Btwn Labs	0.00196	Percent	0.00159	Percent

Samples L41, L42 : AISI 1018, A36

Statistics based on 24 of 32 reporting participants

Key to Method Codes Reported by Participants

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

398UJY (M) - Participant did not submit data for sample L42.

JUAZVG (M) - Participant did not submit data for sample L42.

JZGPRA (X) - Data for both samples are extreme.

N6VR99 (M) - Participant did not submit data for sample L42.

QLCFV9 (X) - Data for both samples are high. Inconsistent within the determinations of both samples.

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

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

XUFTH9 (X) - Data were submitted late. Results were consistent with the other laboratories.

SAMPLE L41	SAMPLE L42
0.00290 Percent	0.00189 Percent