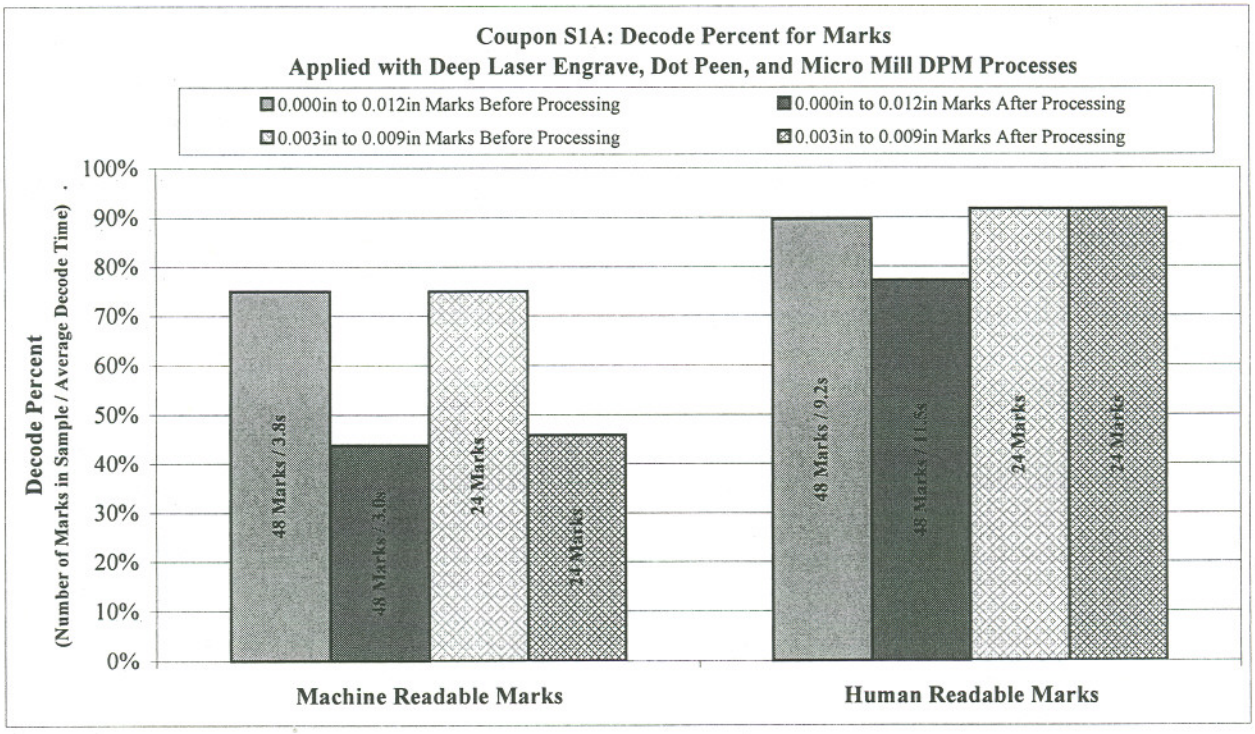
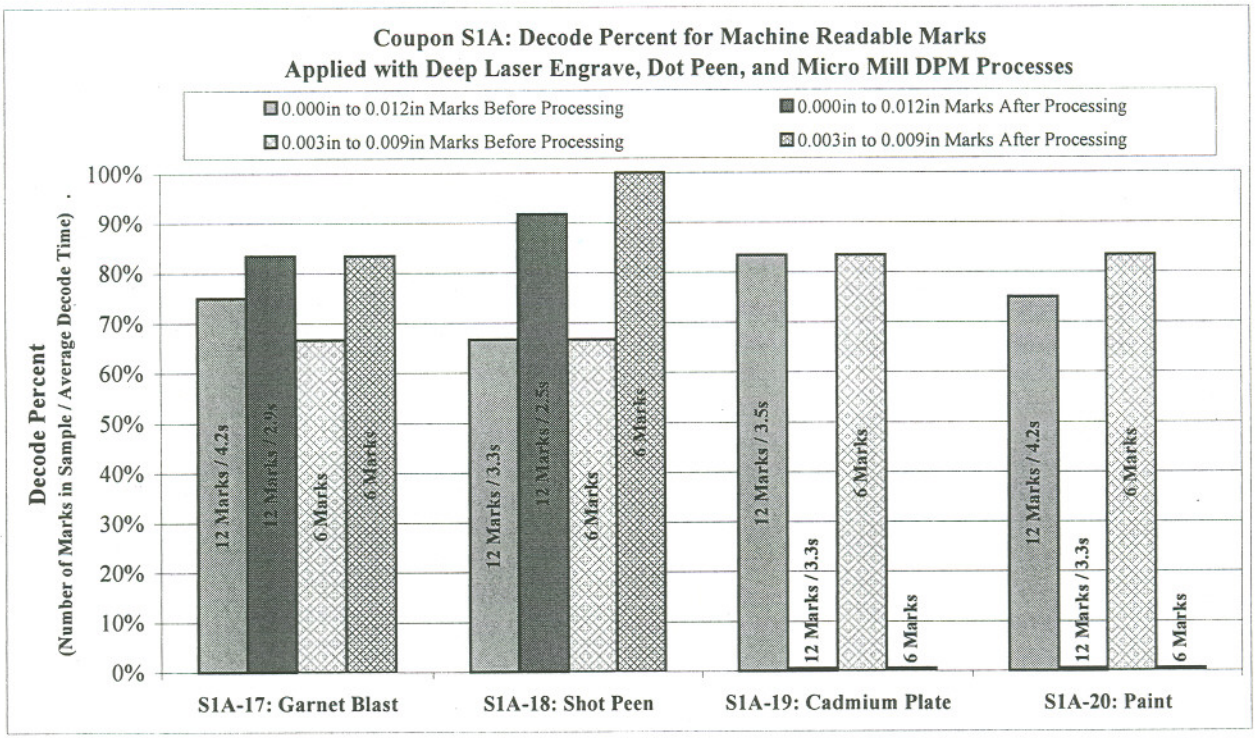
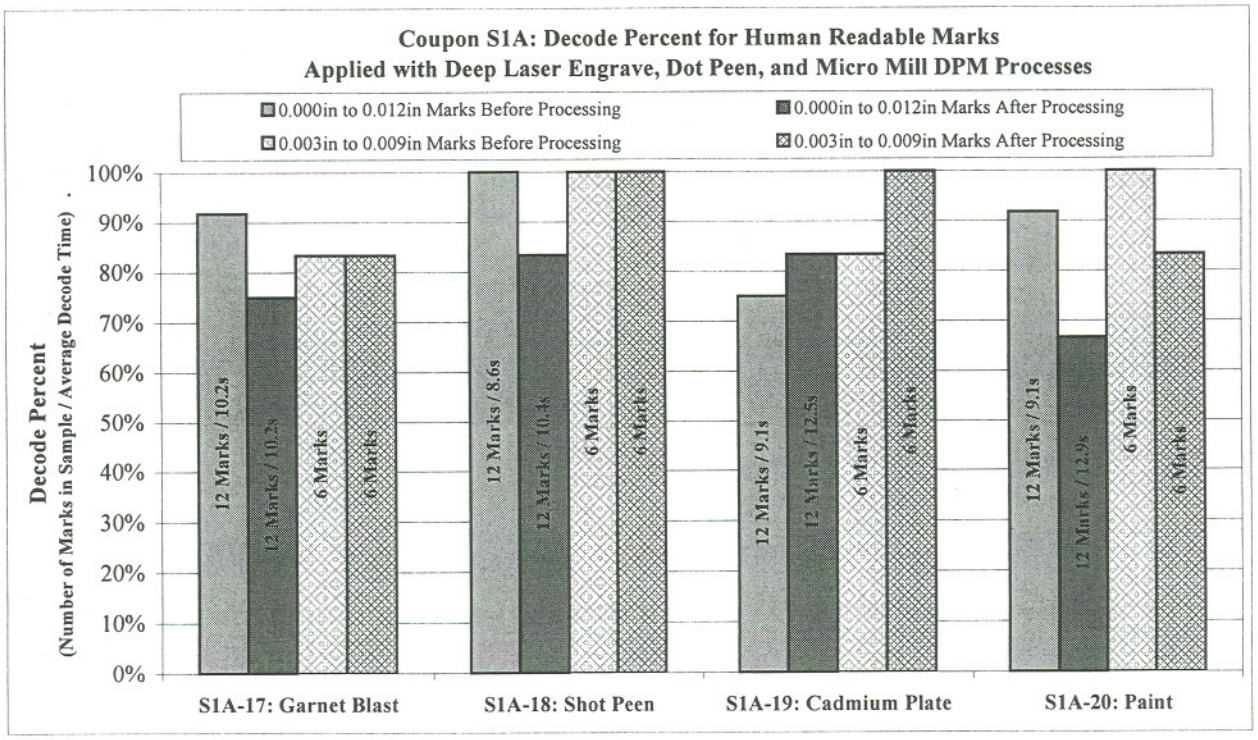
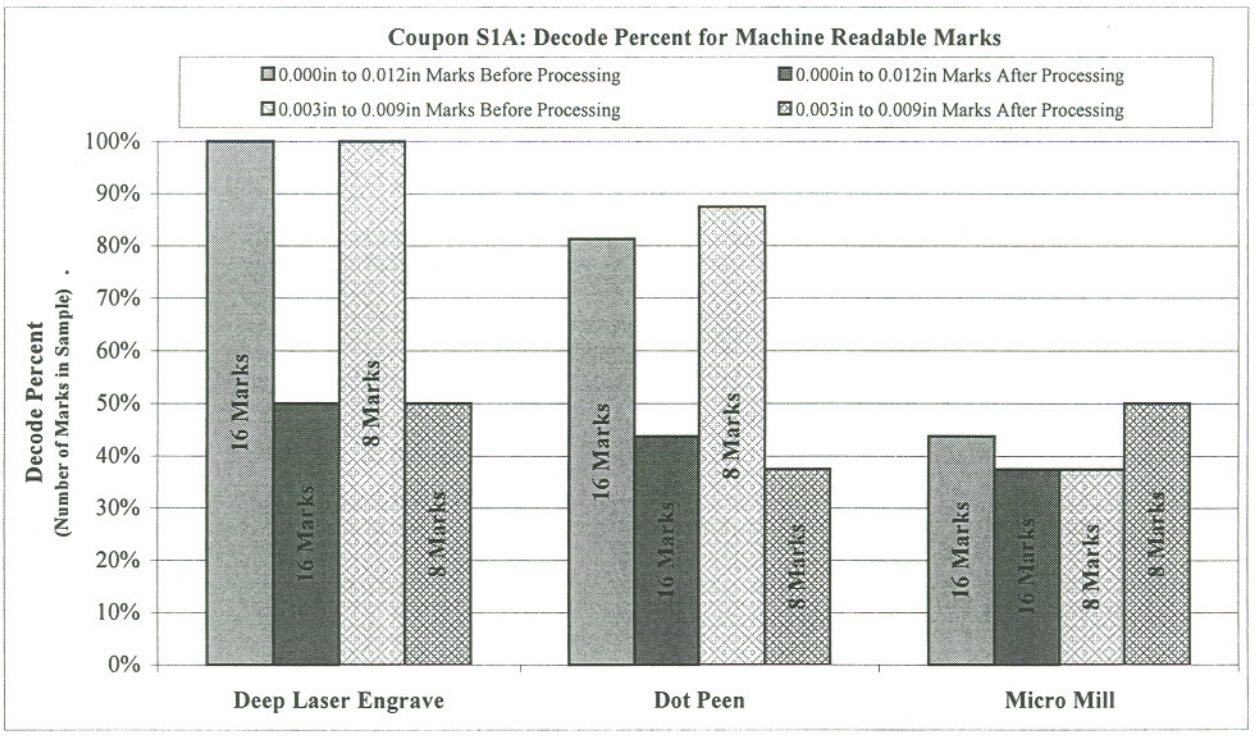
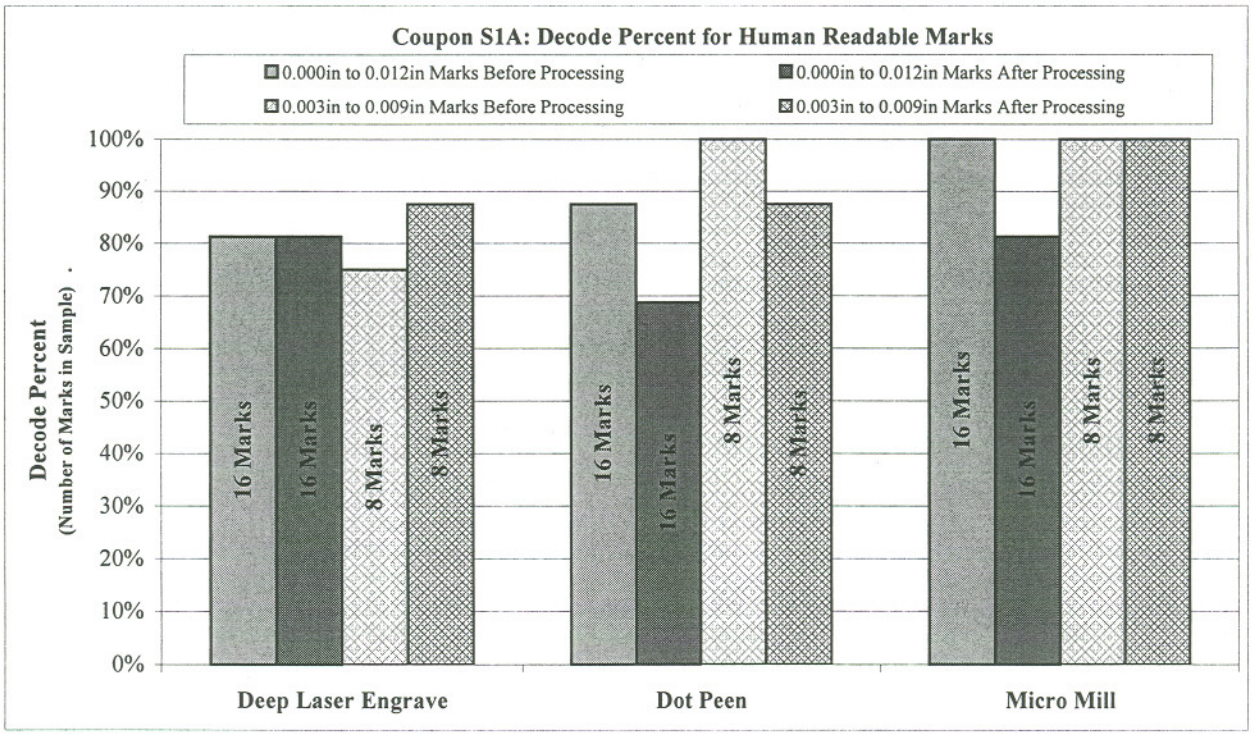
COUPON S1A SUMMARY DATA PLOTS

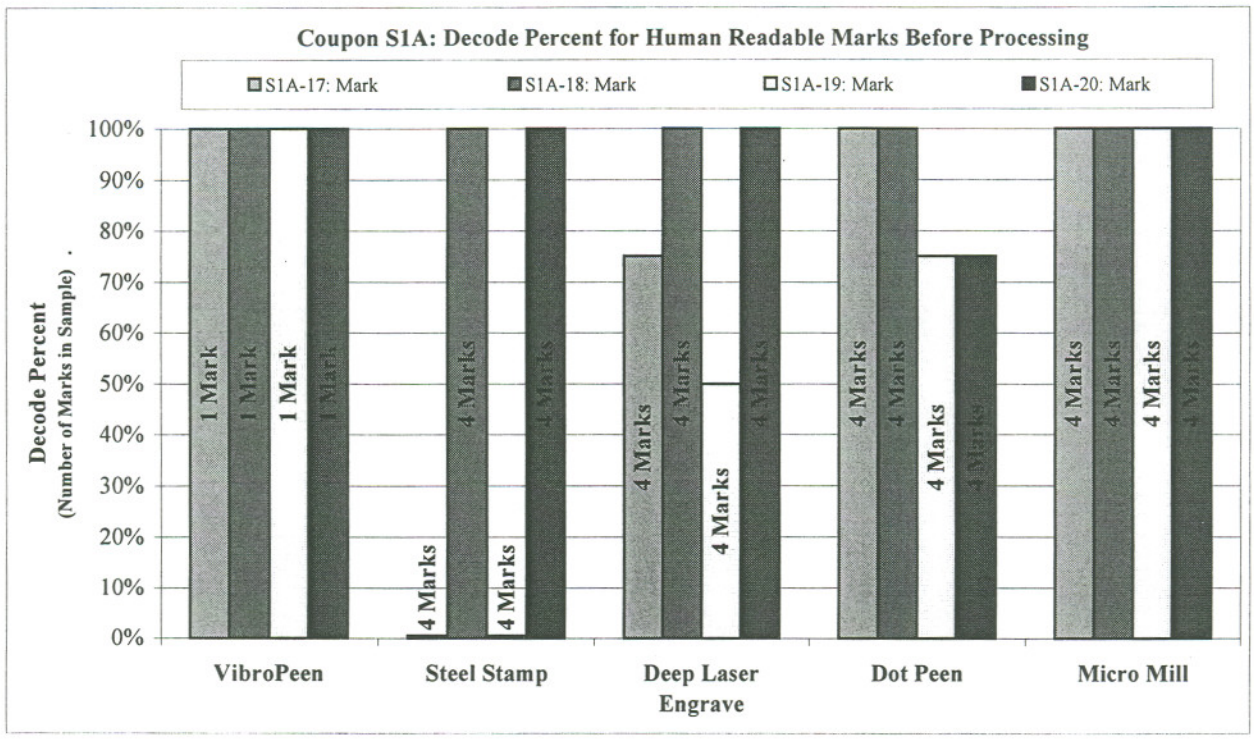

Coupon S1A: Decode Percent for Marks
Applied with Deep Laser Engrave, Dot Peen, and Micro Mill DPM Processes
0.000in to 0.012in Marks Before Processing
0.000in to 0.012in Marks After Processing
0.003in to 0.009in Marks Before Processing
0.003in to 0.009in Marks After Processing
Decode Percent
(Number of Marks in Sample / Average Decode Time)
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
48 Marks / 3.8s
48 Marks / 3.8s
24 Marks
24 Marks
48 Marks / 9.2s
48 Marks / 11.8s
24 Marks
24 Marks
Machine Readable Marks
Human Readable Marks

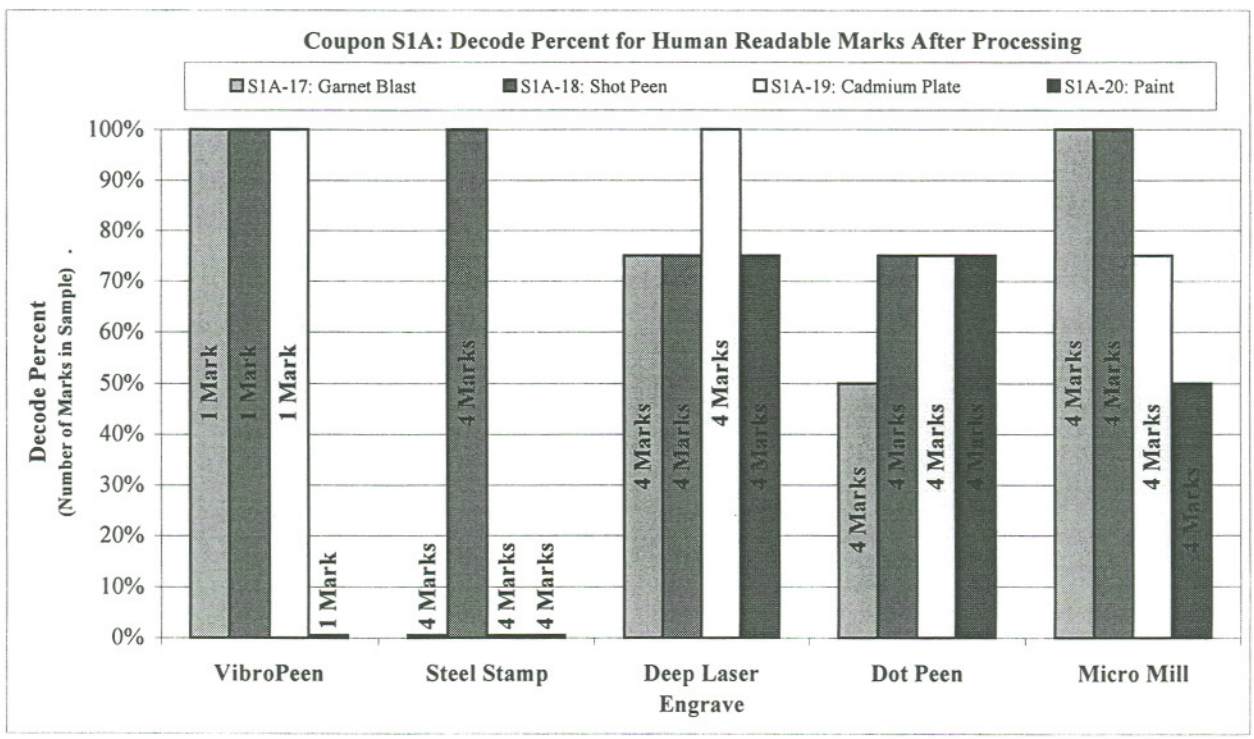

Coupon S1A: Decode Percent for Machine Readable Marks
Applied with Deep Laser Engrave, Dot Peen, and Micro Mill DPM Processes
0.000in to 0.012in Marks Before Processing
0.000in to 0.012in Marks After Processing
0.003in to 0.009in Marks Before Processing
0.003in to 0.009in Marks After Processing
Decode Percent
(Number of Marks in Sample / Average Decode Time)
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
12 Marks / 4.2s
12 Marks / 2.9s
6 Marks
6 Marks
12 Marks / 3.3s
12 Marks / 2.5s
6 Marks
6 Marks
12 Marks / 3.5s
12 Marks / 3.3s
6 Marks
6 Marks
12 Marks / 4.2s
12 Marks / 3.3s
6 Marks
6 Marks
S1A-17: Garnet Blast
S1A-18: Shot Peen
S1A-19: Cadmium Plate
S1A-20: Paint


Coupon S1A: Decode Percent for Human Readable Marks
Applied with Deep Laser Engrave, Dot Peen, and Micro Mill DPM Processes
0.000in to 0.012in Marks Before Processing
0.000in to 0.012in Marks After Processing
0.003in to 0.009in Marks Before Processing
0.003in to 0.009in Marks After Processing
Decode Percent
(Number of Marks in Sample / Average Decode Time)
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
12 Marks / 10.2s
12 Marks / 10.2s
6 Marks
6 Marks
12 Marks / 8.6s
12 Marks / 10.4s
6 Marks
6 Marks
12 Marks / 9.1s
12 Marks / 12.5s
6 Marks
6 Marks
12 Marks / 9.1s
12 Marks / 12.9s
6 Marks
6 Marks
S1A-17: Garnet Blast
S1A-18: Shot Peen
S1A-19: Cadmium Plate
S1A-20: Paint

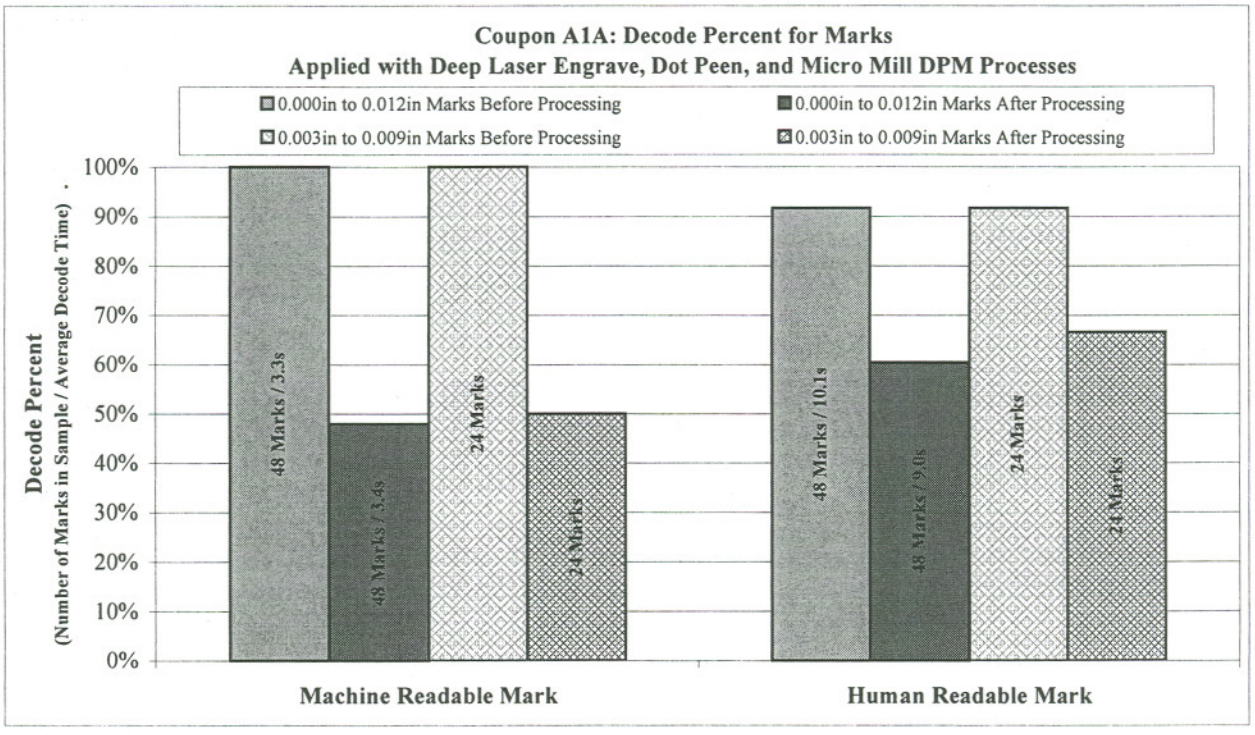

Coupon S1A: Decode Percent for Machine Readable Marks
0.000in to 0.012in Marks Before Processing
0.000in to 0.012in Marks After Processing
0.003in to 0.009in Marks Before Processing
0.003in to 0.009in Marks After Processing
Decode Percent
(Number of Marks in Sample)
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
16 Marks
16 Marks
8 Marks
8 Marks
16 Marks
16 Marks
8 Marks
8 Marks
16 Marks
16 Marks
8 Marks
8 Marks
Deep Laser Engrave
Dot Peen
Micro Mill

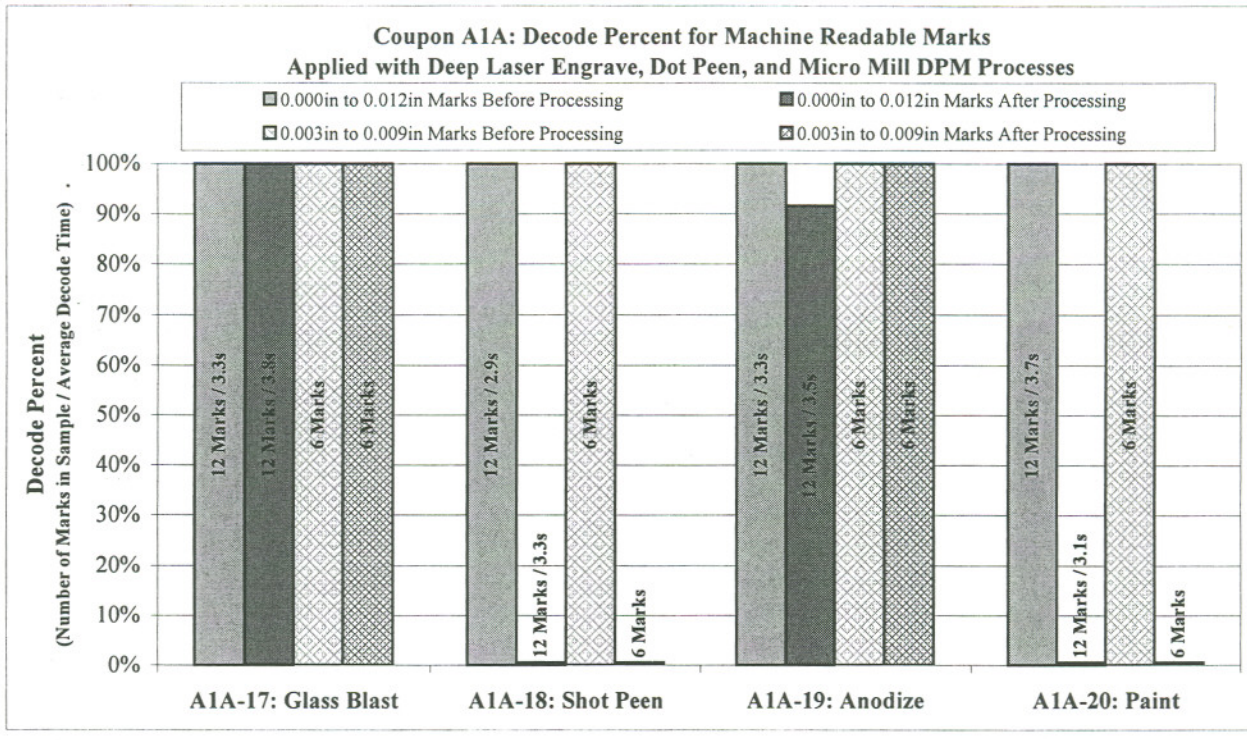

Coupon S1A: Decode Percent for Human Readable Marks
0.000in to 0.012in Marks Before Processing
0.000in to 0.012in Marks After Processing
0.003in to 0.009in Marks Before Processing
0.003in to 0.009in Marks After Processing
Decode Percent
(Number of Marks in Sample)
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
16 Marks
16 Marks
8 Marks
8 Marks
16 Marks
16 Marks
8 Marks
8 Marks
16 Marks
16 Marks
8 Marks
8 Marks
Deep Laser Engrave
Dot Peen
Micro Mill

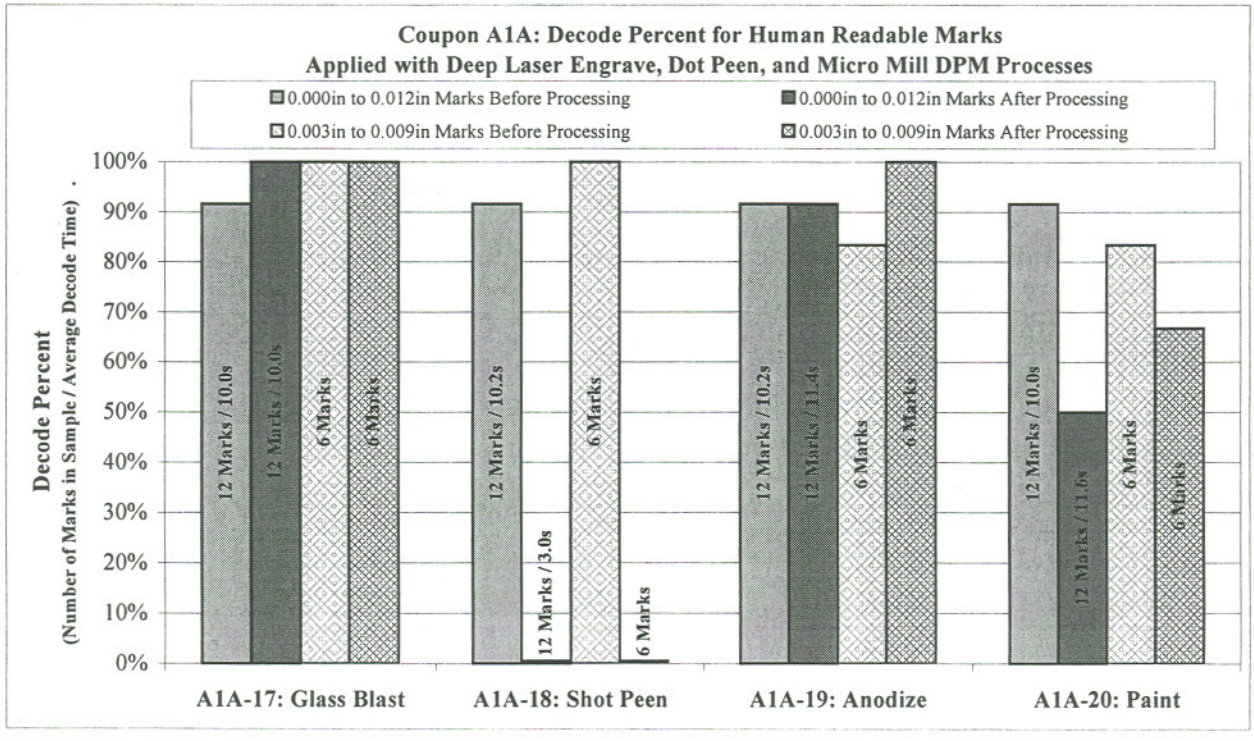

Coupon S1A: Decode Percent for Human Readable Marks Before Processing
S1A-17: Mark
S1A-18: Mark
S1A-19: Mark
S1A-20: Mark
Decode Percent
(Number of Marks in Sample)
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1 Mark
4 Marks
VibroPeen
Steel Stamp
Deep Laser Engrave
Dot Peen
Micro Mill

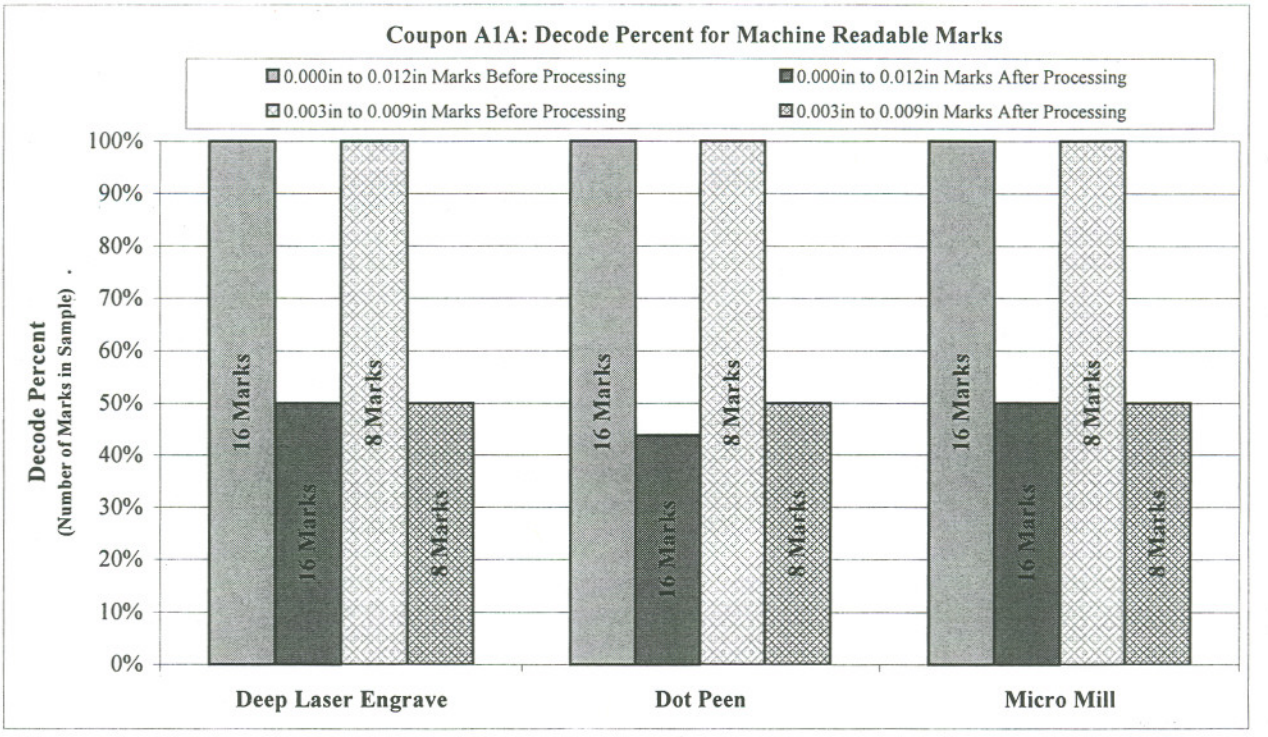

Coupon S1A: Decode Percent for Human Readable Marks After Processing
S1A-17: Garnet Blast
S1A-18: Shot Peen
S1A-19: Cadmium Plate
S1A-20: Paint
Decode Percent
(Number of Marks in Sample)
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1 Mark
4 Marks
VibroPeen
Steel Stamp
Deep Laser Engrave
Dot Peen
Micro Mill

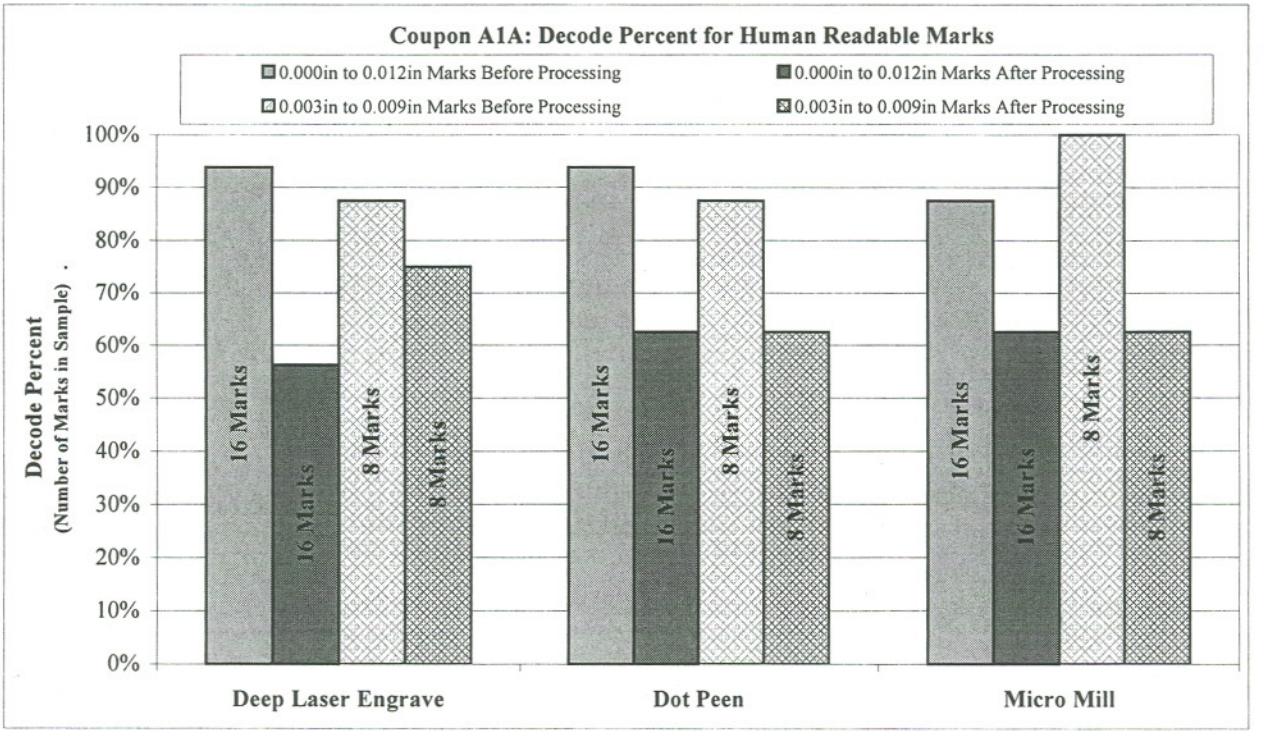
COUPON A1A SUMMARY DATA PLOTS

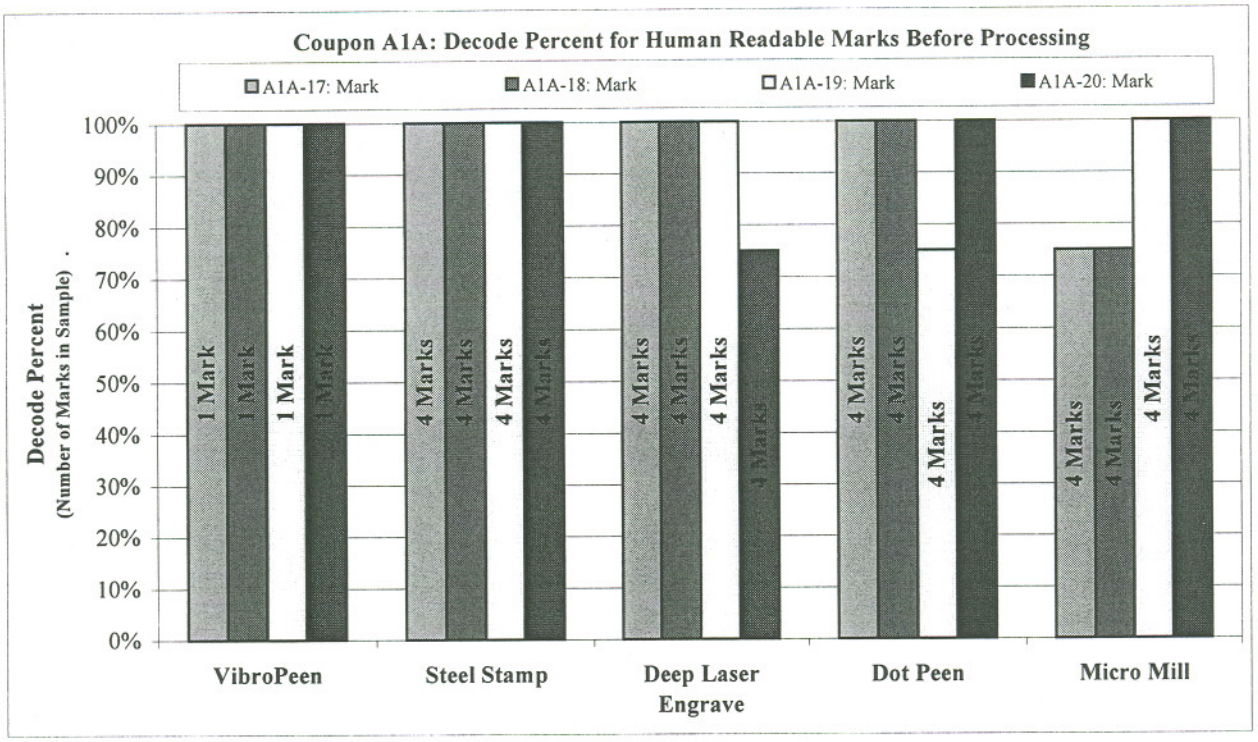

Coupon A1A: Decode Percent for Marks
Applied with Deep Laser Engrave, Dot Peen, and Micro Mill DPM Processes
0.000in to 0.012in Marks Before Processing
0.000in to 0.012in Marks After Processing
0.003in to 0.009in Marks Before Processing
0.003in to 0.009in Marks After Processing
Decode Percent
(Number of Marks in Sample / Average Decode Time)
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
48 Marks / 3.3s
48 Marks / 3.4s
24 Marks
24 Marks
48 Marks / 10.1s
48 Marks / 9.8s
24 Marks
24 Marks
Machine Readable Mark
Human Readable Mark

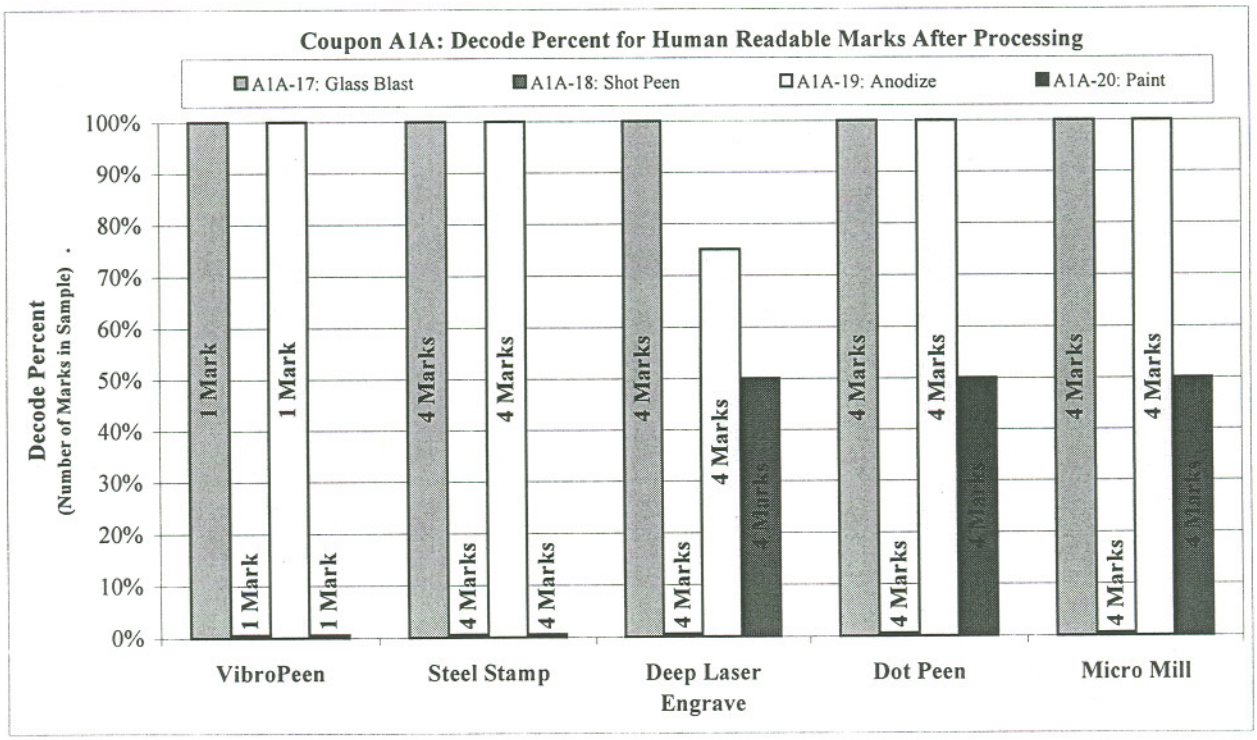

Coupon A1A: Decode Percent for Machine Readable Marks
Applied with Deep Laser Engrave, Dot Peen, and Micro Mill DPM Processes
0.000in to 0.012in Marks Before Processing
0.000in to 0.012in Marks After Processing
0.003in to 0.009in Marks Before Processing
0.003in to 0.009in Marks After Processing
Decode Percent
(Number of Marks in Sample / Average Decode Time)
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
12 Marks / 3.3s
12 Marks / 3.8s
6 Marks
6 Marks
12 Marks / 2.9s
12 Marks / 3.3s
6 Marks
6 Marks
12 Marks / 3.3s
12 Marks / 3.5s
6 Marks
6 Marks
12 Marks / 3.7s
12 Marks / 3.1s
6 Marks
6 Marks
A1A-17: Glass Blast
A1A-18: Shot Peen
A1A-19: Anodize
A1A-20: Paint


Coupon A1A: Decode Percent for Human Readable Marks
Applied with Deep Laser Engrave, Dot Peen, and Micro Mill DPM Processes
0.000in to 0.012in Marks Before Processing
0.000in to 0.012in Marks After Processing
0.003in to 0.009in Marks Before Processing
0.003in to 0.009in Marks After Processing
Decode Percent
(Number of Marks in Sample / Average Decode Time)
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
12 Marks / 10.0s
12 Marks / 10.0s
6 Marks
6 Marks
12 Marks / 10.2s
12 Marks / 3.0s
6 Marks
6 Marks
12 Marks / 10.2s
12 Marks / 11.4s
6 Marks
6 Marks
12 Marks / 10.0s
12 Marks / 11.0s
6 Marks
6 Marks
A1A-17: Glass Blast
A1A-18: Shot Peen
A1A-19: Anodize
A1A-20: Paint


Coupon A1A: Decode Percent for Machine Readable Marks
0.000in to 0.012in Marks Before Processing
0.000in to 0.012in Marks After Processing
0.003in to 0.009in Marks Before Processing
0.003in to 0.009in Marks After Processing
Decode Percent
(Number of Marks in Sample)
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
16 Marks
16 Marks
8 Marks
8 Marks
16 Marks
16 Marks
8 Marks
8 Marks
16 Marks
16 Marks
8 Marks
8 Marks
Deep Laser Engrave
Dot Peen
Micro Mill


Coupon A1A: Decode Percent for Human Readable Marks
0.000in to 0.012in Marks Before Processing
0.000in to 0.012in Marks After Processing
0.003in to 0.009in Marks Before Processing
0.003in to 0.009in Marks After Processing
Decode Percent
(Number of Marks in Sample)
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
16 Marks
16 Marks
8 Marks
8 Marks
16 Marks
16 Marks
8 Marks
8 Marks
16 Marks
16 Marks
8 Marks
8 Marks
Deep Laser Engrave
Dot Peen
Micro Mill


Coupon A1A: Decode Percent for Human Readable Marks Before Processing
A1A-17: Mark
A1A-18: Mark
A1A-19: Mark
A1A-20: Mark
Decode Percent
(Number of Marks in Sample)
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1 Mark
4 Marks
VibroPeen
Steel Stamp
Deep Laser Engrave
Dot Peen
Micro Mill


Coupon A1A: Decode Percent for Human Readable Marks After Processing
A1A-17: Glass Blast
A1A-18: Shot Peen
A1A-19: Anodize
A1A-20: Paint
Decode Percent
(Number of Marks in Sample)
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1 Mark
4 Marks
VibroPeen
Steel Stamp
Deep Laser Engrave
Dot Peen
Micro Mill

APPENDIX F
COUPON MARK DECODING DATA

COUPON S1A

Coupon S1A: Encoded Data

Encoded Data	Vibropeen	Steel Stamp	Deep Laser Engrave				Dot Peen				Micro Mill			
	Mark 1	Mark 1	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4
S1A-17	3120250685	7822946087	1767924793	1767924805	1767924834	1767924851	3284645196	3577148088	1437884521	412058609	3178940236	2937231265	8661523721	6937731644
S1A-18	6218526056	6664451601	1112312379	1112312382	1112312411	1112312428	3121360435	1385908572	4346733799	2734164898	321447293	7472580000	4238403351	7320244897
S1A-19	5982202328	5617948165	1767924712	1767924724	1767924753	1767924770	2344801832	3803098618	1171132250	6994100179	3604629434	7083951874	4056101281	9047138054
S1A-20	3629461285	3692245286	1298412311	1298412314	1298412343	1298412360	3109726188	444048107	9684179898	613743092	449567964	4665343274	3518231552	7575746356

Coupon S1A: Decoding Data Before Processing

Coupon S1A-17

MXi Handheld Reader	Vibropeen	Steel Stamp	Deep Laser Engrave				Dot Peen				Micro Mill				Time (s)
	Mark 1	Mark 1	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	
Operator 1 - Read 1	NA	NA	1767924793	1767924805	1767924834	1767924851	3284645196	3577148088	X	412058609	3178940236	X	X	X	300
Operator 1 - Read 2	NA	NA	1767924793	1767924805	1767924834	1767924851	3284645196	3577148088	X	412058609	3178940236	X	X	X	
Operator 1 - Read 3	NA	NA	1767924793	1767924805	1767924834	1767924851	3284645196	3577148088	X	412058609	3178940236	X	X	X	
Operator 1 - Read 4	NA	NA	1767924793	1767924805	1767924834	1767924851	3284645196	3577148088	X	412058609	3178940236	X	X	X	
Operator 1 - Read 5	NA	NA	1767924793	1767924805	1767924834	1767924851	3284645196	3577148088	X	412058609	3178940236	2937231265	X	X	
Operator 1 - Read 6	NA	NA	1767924793	1767924805	1767924834	1767924851	3284645196	3577148088	X	412058609	3178940236	2937231265	X	X	
Operator	Vibropeen	Steel Stamp	Deep Laser Engrave				Dot Peen				Micro Mill				Time (s)
	Mark 1	Mark 1	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	
Operator 1 - Read 1	3120250685	7822946087	1767924793	1767924805	1767924834	1767924851	3284645196	3577148088	1437884521	412058609	3178940236	2937231265	8661523721	6937731644	240
Operator 1 - Read 2	3120250685	7822946087	1767924793	1767924805	1767924834	1767924851	3284645196	3577148088	1437884521	412058609	3178940236	2937231265	8661523721	6937731644	
Operator 2 - Read 1	3120250685	7822949087	1767924793	1767924805	1767924834	1767924851	3284645196	3577148088	1437884521	412058609	3178940236	2937231265	8661523721	6937731644	300
Operator 2 - Read 2	3120250685	7822949087	1767924793	1767924805	1767924834	1767924851	3284645196	3577148088	1437884521	412058609	3178940236	2937231265	8661523721	6937731644	
Operator 3 - Read 1	3120250685	7822946087	1767924793	1767924805	1767924834	1767924851	3284645196	3577148088	1437884521	412058609	3178940236	2937231265	8661523721	6937731644	315
Operator 3 - Read 2	3120250685	7822946087	1767924793	1767924805	1767924834	1767924851	3284645196	3577148088	1437884521	412058609	3178940236	2937231265	8661523721	6937731644	

Coupon S1A-18

MXi Handheld Reader	Vibropeen	Steel Stamp	Deep Laser Engrave				Dot Peen				Micro Mill				Time (s)
	Mark 1	Mark 1	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	
Operator 1 - Read 1	NA	NA	1112312379	1112312382	1112312411	1112312428	X	1385908572	4346733799	2734164898	321447293	X	X	X	240
Operator 1 - Read 2	NA	NA	1112312379	1112312382	1112312411	1112312428	X	1385908572	4346733799	2734164898	321447293	X	X	X	
Operator 1 - Read 3	NA	NA	1112312379	1112312382	1112312411	1112312428	X	1385908572	4346733799	2734164898	321447293	X	X	X	
Operator 1 - Read 4	NA	NA	1112312379	1112312382	1112312411	1112312428	X	1385908572	4346733799	2734164898	321447293	X	X	X	
Operator 1 - Read 5	NA	NA	1112312379	1112312382	1112312411	1112312428	X	1385908572	4346733799	2734164898	321447293	X	X	X	
Operator 1 - Read 6	NA	NA	1112312379	1112312382	1112312411	1112312428	X	1385908572	4346733799	2734164898	321447293	X	X	X	
Operator	Vibropeen	Steel Stamp	Deep Laser Engrave				Dot Peen				Micro Mill				Time (s)
	Mark 1	Mark 1	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	
Operator 1 - Read 1	6218526056	6664451601	1112312379	1112312382	1112312411	1112312428	3121360435	1385908572	4346733799	2734164898	321447293	7472580000	4238403351	7320244897	240
Operator 1 - Read 2	6218526056	6664451601	1112312379	1112312382	1112312411	1112312428	3121360435	1385908572	4346733799	2734164898	321447293	7472580000	4238403351	7320244897	
Operator 2 - Read 1	6218526056	6664451601	1112312379	1112312382	1112312411	1112312428	3121360435	1385908572	4346733799	2734164898	321447293	7472580000	4238403351	7320244897	210
Operator 2 - Read 2	6218526056	6664451601	1112312379	1112312382	1112312411	1112312428	3121360435	1385908572	4346733799	2734164898	321447293	7472580000	4238403351	7320244897	
Operator 3 - Read 1	6218526056	6664451601	1112312379	1112312382	1112312411	1112312428	3121360435	1385908572	4346733799	2734164898	321447293	7472580000	4238403351	7320244897	270
Operator 3 - Read 2	6218526056	6664451601	1112312379	1112312382	1112312411	1112312428	3121360435	1385908572	4346733799	2734164898	321447293	7472580000	4238403351	7320244897	

Coupon S1A-19

MXi Handheld Reader	Vibropeen	Steel Stamp	Deep Laser Engrave				Dot Peen				Micro Mill				Time (s)
	Mark 1	Mark 1	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	
Operator 1 - Read 1	NA	NA	1767924712	1767924724	1767924753	1767924770	2344801832	3803098618	1171132250	6994100179	3604629434	7083951874	X	X	255
Operator 1 - Read 2	NA	NA	1767924712	1767924724	1767924753	1767924770	2344801832	3803098618	1171132250	6994100179	3604629434	7083951874	X	X	
Operator 1 - Read 3	NA	NA	1767924712	1767924724	1767924753	1767924770	2344801832	3803098618	1171132250	6994100179	3604629434	7083951874	X	X	
Operator 1 - Read 4	NA	NA	1767924712	1767924724	1767924753	1767924770	2344801832	3803098618	1171132250	6994100179	3604629434	7083951874	X	X	
Operator 1 - Read 5	NA	NA	1767924712	1767924724	1767924753	1767924770	2344801832	3803098618	1171132250	6994100179	3604629434	7083951874	X	X	
Operator 1 - Read 6	NA	NA	1767924712	1767924724	1767924753	1767924770	2344801832	3803098618	1171132250	6994100179	3604629434	7083951874	X	X	
Operator	Vibropeen	Steel Stamp	Deep Laser Engrave				Dot Peen				Micro Mill				Time (s)
	Mark 1	Mark 1	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	
Operator 1 - Read 1	5982202328	5617948165	1767924712	1767924724	1767924753	1767924770	2344801832	3803098618	1171132250	6994100179	3604629434	7083951874	4056101281	9047138054	240
Operator 1 - Read 2	5982202328	5617948165	1767924712	1767924724	1767924753	1767924770	2344801832	3803098618	1171132250	6994100179	3604629434	7083951874	4056101281	9047138054	
Operator 2 - Read 1	5982202328	5617943165	1767924712	1767924724	1767924753	1767924770	2344801832	3803098618	1171132250	6994100179	3604629434	7083951874	4056101281	9047138054	240
Operator 2 - Read 2	5982202328	5617948165	1767924712	1767924724	1767924753	1767924770	2344801832	3803098618	1171132250	6994100179	3604629434	7083951874	4056101281	9047138054	
Operator 3 - Read 1	5982202328	5617948166	1767924712	1767924724	1767924753	1767924770	2344801832	3803098618	1171132250	6994100179	3604629434	7083951874	4056101281	9047138054	285
Operator 3 - Read 2	5982202328	5617948165	1767924712	1767924724	1767924753	1767924770	2344801832	3803098618	1171132250	6994100179	3604629434	7083951874	4056101281	9047138054	

Coupon S1A-20

MXi Handheld Reader	Vibropeen	Steel Stamp	Deep Laser Engrave				Dot Peen				Micro Mill				Time (s)
	Mark 1	Mark 1	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	
Operator 1 - Read 1	NA	NA	1298412311	X	1298412343	1298412360	X	444048107	9684179898	613743092	449567964	4665343274	X	X	300
Operator 1 - Read 2	NA	NA	1298412311	X	1298412343	1298412360	X	444048107	9684179898	613743092	449567964	4665343274	X	X	
Operator 1 - Read 3	NA	NA	1298412311	X	1298412343	1298412360	X	444048107	9684179898	613743092	449567964	4665343274	X	X	
Operator 1 - Read 4	NA	NA	1298412311	X	1298412343	1298412360	X	444048107	9684179898	613743092	449567964	4665343274	X	X	
Operator 1 - Read 5	NA	NA	1298412311	1298412314	1298412343	1298412360	X	444048107	9684179898	613743092	449567964	4665343274	X	X	
Operator 1 - Read 6	NA	NA	1298412311	1298412314	1298412343	1298412360	X	444048107	9684179898	613743092	449567964	4665343274	X	X	
Operator	Vibropeen	Steel Stamp	Deep Laser Engrave				Dot Peen				Micro Mill				Time (s)
	Mark 1	Mark 1	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	
Operator 1 - Read 1	3629461285	3692245286	1298412311	1298412314	1298412343	1298412360	3109726188	444048107	9684179898	613743092	449567964	4665343274	3518231552	7575746356	240
Operator 1 - Read 2	3629461285	3692245286	1298412311	1298412314	1298412343	1298412360	3109726188	444048107	9684179898	613743092	449567964	4665343274	3518231552	7575746356	
Operator 2 - Read 1	3629461285	3692245286	1298412311	1298412314	1298412343	1298412360	3109726188	444048107	9684179898	613743092	449567964	4665343274	3518231552	7575746356	240
Operator 2 - Read 2	3629461285	3692245286	1298412311	1298412314	1298412343	1298412360	3109726188	444048107	9684179898	613743092	449567964	4665343274	3518231552	7575746356	
Operator 3 - Read 1	3629461285	3692245286	1298412311	1298412314	1298412343	1298412360	3189726188	444048107	9684179898	613743092	449567964	4665343274	3518231552	7575746356	285
Operator 3 - Read 2	3629461285	3692245286	1298412311	1298412314	1298412343	1298412360	3189726188	444048107	9684179898	613743092	449567964	4665343274	3518231552	7575746356	

Coupon S1A: Summary of Decoding Data Before Processing

MRM	Vibropeen	Steel Stamp	Deep Laser Engrave				Dot Peen				Micro Mill				Average
	Mark 1	Mark 1	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Time (s)
S1A-17	NA	NA	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No	No	4.2
S1A-18	NA	NA	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No	No	No	3.3
S1A-19	NA	NA	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	3.5
S1A-20	NA	NA	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	No	No	4.2
HRM	Vibropeen	Steel Stamp	Deep Laser Engrave				Dot Peen				Micro Mill				Average
	Mark 1	Mark 1	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Time (s)
S1A-17	Yes	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	10.2
S1A-18	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	8.6
S1A-19	Yes	No	Yes	Yes	No	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	9.1
S1A-20	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	9.1

Coupon S1A: Depth Data Before Processing

Coupon S1A-17													
Depth Gage	Vibropeen	Steel Stamp	Deep Laser Engrave				Dot Peen				Micro Mill			
	Mark 1	Mark 1	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4
Measurement 1	0.0020	0.0010	0.0030	0.0040	0.0080	0.0120	0.0005	0.0020	0.0040	0.0060	0.0005	0.0020	0.0055	0.0105
Measurement 2	0.0030	0.0005	0.0030	0.0050	0.0090	0.0120	0.0005	0.0015	0.0040	0.0045	0.0010	0.0015	0.0065	0.0110
Measurement 3	0.0010	0.0005	0.0030	0.0045	0.0080	0.0115	0.0005	0.0020	0.0035	0.0060	0.0005	0.0010	0.0060	0.0100

Coupon S1A-18													
Depth Gage	Vibropeen	Steel Stamp	Deep Laser Engrave				Dot Peen				Micro Mill			
	Mark 1	Mark 1	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4
Measurement 1	0.0020	0.0005	0.0030	0.0050	0.0100	0.0130	0.0010	0.0030	0.0040	0.0070	0.0005	0.0030	0.0060	0.0110
Measurement 2	0.0030	0.0000	0.0030	0.0040	0.0100	0.0130	0.0010	0.0030	0.0040	0.0065	0.0010	0.0025	0.0070	0.0120
Measurement 3	0.0035	0.0005	0.0030	0.0050	0.0100	0.0135	0.0010	0.0025	0.0040	0.0060	0.0005	0.0030	0.0065	0.0130

Coupon S1A-19													
Depth Gage	Vibropeen	Steel Stamp	Deep Laser Engrave				Dot Peen				Micro Mill			
	Mark 1	Mark 1	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4
Measurement 1	0.0020	0.0000	0.0025	0.0035	0.0090	0.0120	0.0015	0.0020	0.0040	0.0055	0.0015	0.0025	0.0070	0.0095
Measurement 2	0.0025	0.0010	0.0020	0.0040	0.0090	0.0120	0.0010	0.0015	0.0040	0.0055	0.0010	0.0025	0.0070	0.0100
Measurement 3	0.0010	0.0005	0.0020	0.0035	0.0090	0.0130	0.0005	0.0020	0.0045	0.0060	0.0010	0.0020	0.0060	0.0105

Coupon S1A-20													
Depth Gage	Vibropeen	Steel Stamp	Deep Laser Engrave				Dot Peen				Micro Mill			
	Mark 1	Mark 1	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4
Measurement 1	0.0030	0.0005	0.0030	0.0045	0.0100	0.0120	0.0010	0.0025	0.0040	0.0070	0.0015	0.0030	0.0080	0.0110
Measurement 2	0.0025	0.0000	0.0030	0.0040	0.0100	0.0130	0.0010	0.0030	0.0045	0.0060	0.0020	0.0020	0.0080	0.0110
Measurement 3	0.0020	0.0010	0.0025	0.0050	0.0100	0.0130	0.0050	0.0020	0.0040	0.0060	0.0020	0.0030	0.0070	0.0105

Coupon S1A: Summary of Depth Data Before Processing

Coupon	Vibropeen	Steel Stamp	Deep Laser Engrave				Dot Peen				Micro Mill			
	Mark 1	Mark 1	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4
S1A-17	0.002	0.001	0.003	0.005	0.008	0.012	0.001	0.002	0.004	0.006	0.001	0.002	0.006	0.011
S1A-18	0.003	0.000	0.003	0.005	0.010	0.013	0.001	0.003	0.004	0.007	0.001	0.003	0.007	0.012
S1A-19	0.002	0.001	0.002	0.004	0.009	0.012	0.001	0.002	0.004	0.006	0.001	0.002	0.007	0.010
S1A-20	0.003	0.001	0.003	0.005	0.010	0.013	0.002	0.003	0.004	0.006	0.002	0.003	0.008	0.011
Average	0.002	0.001	0.003	0.004	0.009	0.013	0.001	0.002	0.004	0.006	0.001	0.002	0.007	0.011

Coupon S1A: Encoded Data

Encoded Data	Vibropeen	Steel Stamp	Deep Laser Engrave				Dot Peen				Micro Mill			
	Mark 1	Mark 1	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4
S1A-17	3120250685	7822946087	1767924793	1767924805	1767924834	1767924851	3284645196	3577148088	1437884521	412058609	3178940236	2937231265	8661523721	6937731644
S1A-18	6218526056	6664451601	1112312379	1112312382	1112312411	1112312428	3121360435	1385908572	4346733799	2734164898	321447293	7472580000	4238403351	7320244897
S1A-19	5982202328	5617948165	1767924712	1767924724	1767924753	1767924770	2344801832	3803098618	1171132250	6994100179	3604629434	7083951874	4056101281	9047138054
S1A-20	3629461285	3692245286	1298412311	1298412314	1298412343	1298412360	3109726188	444048107	9684179898	613743092	449567964	4665343274	3518231552	7575746356

Coupon S1A: Decoding Data After Processing

Coupon S1A-17

MXI Handheld Reader	Vibropeen	Steel Stamp	Deep Laser Engrave				Dot Peen				Micro Mill				Time (s)
	Mark 1	Mark 1	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	
Operator 1 - Read 1	NA	NA	1767924793	1767924805	1767924834	1767924851	3284645196	3577148088	X	412058609	X	2937231265	8661523721	6937731644	210
Operator 1 - Read 2	NA	NA	1767924793	1767924805	1767924834	1767924851	3284645196	3577148088	X	412058609	X	2937231265	8661523721	6937731644	
Operator 1 - Read 3	NA	NA	1767924793	1767924805	1767924834	1767924851	3284645196	3577148088	X	412058609	X	2937231265	8661523721	6937731644	
Operator 1 - Read 4	NA	NA	1767924793	1767924805	1767924834	1767924851	3284645196	3577148088	X	412058609	X	2937231265	8661523721	6937731644	
Operator 1 - Read 5	NA	NA	1767924793	1767924805	1767924834	1767924851	3284645196	3577148088	X	412058609	X	2937231265	8661523721	6937731644	
Operator 1 - Read 6	NA	NA	1767924793	1767924805	1767924834	1767924851	3284645196	3577148088	X	412058609	X	2937231265	8661523721	6937731644	
Operator	Vibropeen	Steel Stamp	Deep Laser Engrave				Dot Peen				Micro Mill				Time (s)
	Mark 1	Mark 1	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	
Operator 1 - Read 1	3120250685	7822918087	1767924793	1767924805	1767924834	1767924851	3284645196	3577148088	1437884521	412058609	3178940236	2937231265	8661523721	6937731644	315
Operator 1 - Read 2	3120250685	7822946087	1767924793	1767924805	1767924834	1767924851	3284645196	3577148088	1437884521	412058609	3178940236	2937231265	8661523721	6937731644	
Operator 2 - Read 1	3120250685	7822946087	1767924793	1767924805	1767924834	1767924851	328465196	3577148088	1437833521	412058609	3178940236	2937231265	8661523721	6937731644	255
Operator 2 - Read 2	3120250685	7822946087	1767924793	1767924805	1767924834	1767924851	3284645196	3577148088	1437884521	412058609	3178940236	2937231265	8661523721	6937731644	
Operator 3 - Read 1	3120250685	7822946087	1767924798	1767924805	1767924834	1767924851	3284645196	3577148088	1437884521	412058609	3178940236	2937231265	8661523721	6937731644	285
Operator 3 - Read 2	3120250685	7822946087	1767924798	1767924805	1767924834	1767924851	3284645196	3577148088	1437884521	412058609	3178940236	2937231265	8661523721	6937731644	

Coupon S1A-18

MXI Handheld Reader	Vibropeen	Steel Stamp	Deep Laser Engrave				Dot Peen				Micro Mill				Time (s)
	Mark 1	Mark 1	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	
Operator 1 - Read 1	NA	NA	1112312379	1112312382	1112312411	1112312428	3121360435	1385908572	4346733799	2734164898	X	7472580000	4238403351	7320244897	180
Operator 1 - Read 2	NA	NA	1112312379	1112312382	1112312411	1112312428	3121360435	1385908572	4346733799	2734164898	X	7472580000	4238403351	7320244897	
Operator 1 - Read 3	NA	NA	1112312379	1112312382	1112312411	1112312428	3121360435	1385908572	4346733799	2734164898	X	7472580000	4238403351	7320244897	
Operator 1 - Read 4	NA	NA	1112312379	1112312382	1112312411	1112312428	3121360435	1385908572	4346733799	2734164898	X	7472580000	4238403351	7320244897	
Operator 1 - Read 5	NA	NA	1112312379	1112312382	1112312411	1112312428	3121360435	1385908572	4346733799	2734164898	X	7472580000	4238403351	7320244897	
Operator 1 - Read 6	NA	NA	1112312379	1112312382	1112312411	1112312428	3121360435	1385908572	4346733799	2734164898	X	7472580000	4238403351	7320244897	
Operator	Vibropeen	Steel Stamp	Deep Laser Engrave				Dot Peen				Micro Mill				Time (s)
	Mark 1	Mark 1	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	
Operator 1 - Read 1	6218526056	6664451601	1112312379	1112312382	1112312411	1112312428	3121360435	1385908572	4346733799	2734164898	321447293	7472580000	4238403351	7320244897	330
Operator 1 - Read 2	6218526056	6664451601	1112312379	1112312382	1112312411	1112312428	3121360435	1385908572	4346733799	2734164898	321447293	7472580000	4238403351	7320244897	
Operator 2 - Read 1	6218526056	6664451601	1112312379	1112312382	1112312411	11123124828	3121360435	1385908572	4346733799	2734164898	321447293	7472580000	4238403351	7320244897	240
Operator 2 - Read 2	6218526056	6664451601	1112312379	1112312382	1112312411	1112312428	3121360435	1385908572	4346733799	2734164898	321447293	7472580000	4238403351	7320244897	
Operator 3 - Read 1	6218526056	6664451601	1112312379	1112312382	1112312411	1112312428	3121560435	1385908572	4346733799	2734164898	321447293	7472580000	4238403351	7320244897	300
Operator 3 - Read 2	6218526056	6664451601	1112312379	1112312382	1112312411	1112312428	3121560435	1385908572	4346733799	2734164898	321447293	7472580000	4238403351	7320244897	

Coupon S1A-19

MXI Handheld Reader	Vibropeen	Steel Stamp	Deep Laser Engrave				Dot Peen				Micro Mill				Time (s)
	Mark 1	Mark 1	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	
Operator 1 - Read 1	NA	NA	X	X	X	X	X	X	X	X	X	X	X	X	240
Operator 1 - Read 2	NA	NA	X	X	X	X	X	X	X	X	X	X	X	X	
Operator 1 - Read 3	NA	NA	X	X	X	X	X	X	X	X	X	X	X	X	
Operator 1 - Read 4	NA	NA	X	X	X	X	X	X	X	X	X	X	X	X	
Operator 1 - Read 5	NA	NA	X	X	X	X	X	X	X	X	X	X	X	X	
Operator 1 - Read 6	NA	NA	X	X	X	X	X	X	X	X	X	X	X	X	
Operator	Vibropeen	Steel Stamp	Deep Laser Engrave				Dot Peen				Micro Mill				Time (s)
	Mark 1	Mark 1	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	
Operator 1 - Read 1	5982202328	X	1767924712	1767924724	1767924753	1767924770	X	3803098618	1171132250	6994100179	3604629434	7083951874	4056101281	9047138054	375
Operator 1 - Read 2	5982202328	X	1767924712	1767924724	1767924753	1767924770	X	3803098618	1171132250	6994100179	3604629434	7083951874	4056101281	9047138054	
Operator 2 - Read 1	5982202328	6617734165	1767924712	1767924724	1767924753	1767924770	X	3803098618	1171132250	6994100179	3604629434	7083951874	4056101281	9047138054	315
Operator 2 - Read 2	5982202328	3617918162	1767924712	1767924724	1767924753	1767924770	X	3803098618	1171132250	6994100179	3604629434	7083951874	4056101281	9047138054	
Operator 3 - Read 1	5982202328	79481 65	1767924712	1767924724	1767924753	1767924770	X	3803098618	1171132250	6994100179	5604629434	7083951874	4056101281	9047138054	360
Operator 3 - Read 2	5982202328	79481 65	1767924712	1767924724	1767924753	1767924770	X	3803098618	1171132250	6994100179	5604629434	7083951874	4056101281	9047138054	

Coupon S1A-20

MXI Handheld Reader	Vibropeen	Steel Stamp	Deep Laser Engrave				Dot Peen				Micro Mill				Time (s)
	Mark 1	Mark 1	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	
Operator 1 - Read 1	NA	NA	X	X	X	X	X	X	X	X	X	X	X	X	240
Operator 1 - Read 2	NA	NA	X	X	X	X	X	X	X	X	X	X	X	X	
Operator 1 - Read 3	NA	NA	X	X	X	X	X	X	X	X	X	X	X	X	
Operator 1 - Read 4	NA	NA	X	X	X	X	X	X	X	X	X	X	X	X	
Operator 1 - Read 5	NA	NA	X	X	X	X	X	X	X	X	X	X	X	X	
Operator 1 - Read 6	NA	NA	X	X	X	X	X	X	X	X	X	X	X	X	
Operator	Vibropeen	Steel Stamp	Deep Laser Engrave				Dot Peen				Micro Mill				Time (s)
	Mark 1	Mark 1	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	
Operator 1 - Read 1	3619461285	3692243286	1298412311	1298412314	1298412343	1298412360	X	444048107	9684179898	613743092	449567964	4665343274	3518231552	7575746356	420
Operator 1 - Read 2	3629461285	3692233286	1298412311	1298412314	1298412343	1298412360	X	444048107	9684179898	613743092	448567964	4665343274	3518231552	7575746356	
Operator 2 - Read 1	3429461285	369224528	1298412311	1298412314	1298412343	1298412360	X	444048107	9684179898	613743092	449567964	4665343274	3518231552	7575746356	315
Operator 2 - Read 2	3629461285	3692225286	1298412311	1298412314	1298412343	1298412360	X	444048107	9684179898	613743092	449567964	4665343274	3518231552	7575746356	
Operator 3 - Read 1	362946283	3692245286	1298412311	1298412314	1298412343	1298412360	X	444048107	9684179898	613743092	449567964	4665343274	3518231552	7878746356	345
Operator 3 - Read 2	362946283	3692243568	1298412311	1298412314	1298412343	1298412360	X	444048107	9684179898	613743092	449567964	4665343274	3518231552	7878746356	

Coupon S1A: Summary of Decoding Data After Processing

MRM	Vibropeen	Steel Stamp	Deep Laser Engrave				Dot Peen				Micro Mill				Average
	Mark 1	Mark 1	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Time (s)
S1A-17	NA	NA	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	2.9
S1A-18	NA	NA	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	2.5
S1A-19	NA	NA	No	No	No	No	No	No	No	No	No	No	No	No	3.3
S1A-20	NA	NA	No	No	No	No	No	No	No	No	No	No	No	No	3.3
HRM	Vibropeen	Steel Stamp	Deep Laser Engrave				Dot Peen				Micro Mill				Average
	Mark 1	Mark 1	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Time (s)
S1A-17	Yes	No	No	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes	Yes	10.2
S1A-18	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	10.4
S1A-19	Yes	No	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes	12.5
S1A-20	No	No	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No	Yes	Yes	No	12.9

Coupon S1A: Depth Data After Processing

Coupon S1A-17

Depth Gage	Vibropeen	Steel Stamp	Deep Laser Engrave				Dot Peen				Micro Mill			
	Mark 1	Mark 1	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4
Measurement 1	0.0015	0.0010	0.0015	0.0045	0.0080	0.0120	0.0000	0.0015	0.0035	0.0055	0.0010	0.0020	0.0050	0.0100
Measurement 2	0.0020	0.0015	0.0020	0.0040	0.0085	0.0120	0.0005	0.0020	0.0045	0.0055	0.0005	0.0025	0.0065	0.0100
Measurement 3	0.0020	0.0005	0.0025	0.0045	0.0080	0.0115	0.0005	0.0020	0.0045	0.0060	0.0015	0.0020	0.0060	0.0110

Coupon S1A-18

Depth Gage	Vibropeen	Steel Stamp	Deep Laser Engrave				Dot Peen				Micro Mill			
	Mark 1	Mark 1	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4
Measurement 1	0.0020	0.0000	0.0015	0.0040	0.0075	0.0120	0.0005	0.0020	0.0030	0.0060	0.0005	0.0035	0.0060	0.0115
Measurement 2	0.0020	0.0000	0.0020	0.0040	0.0080	0.0120	0.0000	0.0020	0.0035	0.0060	0.0005	0.0030	0.0065	0.0120
Measurement 3	0.0025	0.0005	0.0020	0.0045	0.0080	0.0115	0.0005	0.0015	0.0030	0.0060	0.0000	0.0030	0.0070	0.0120

Coupon S1A-19

Depth Gage	Vibropeen	Steel Stamp	Deep Laser Engrave				Dot Peen				Micro Mill			
	Mark 1	Mark 1	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4
Measurement 1	0.0030	0.0000	0.0025	0.0030	0.0090	0.0120	0.0000	0.0015	0.0040	0.0060	0.0005	0.0020	0.0065	0.0100
Measurement 2	0.0025	0.0005	0.0025	0.0030	0.0095	0.0125	0.0005	0.0015	0.0035	0.0055	0.0001	0.0025	0.0070	0.0105
Measurement 3	0.0020	0.0005	0.0020	0.0035	0.0090	0.0130	0.0005	0.0010	0.0035	0.0050	0.0005	0.0020	0.0065	0.0100

Coupon S1A-20

Depth Gage	Vibropeen	Steel Stamp	Deep Laser Engrave				Dot Peen				Micro Mill			
	Mark 1	Mark 1	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4
Measurement 1	0.0050	0.0000	0.0005	0.0020	0.0070	0.0090	0.0000	0.0000	0.0010	0.0010	0.0000	0.0015	0.0030	0.0060
Measurement 2	0.0000	0.0000	0.0005	0.0020	0.0050	0.0110	0.0000	0.0005	0.0015	0.0010	0.0005	0.0015	0.0050	0.0080
Measurement 3	0.0000	0.0000	0.0010	0.0015	0.0050	0.0100	0.0000	0.0000	0.0010	0.0015	0.0000	0.0020	0.0030	0.0060

Coupon S1A: Summary of Depth Data After Processing

Coupon	Vibropeen	Steel Stamp	Deep Laser Engrave				Dot Peen				Micro Mill			
	Mark 1	Mark 1	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4
S1A-17	0.002	0.001	0.002	0.004	0.008	0.012	0.000	0.002	0.004	0.006	0.001	0.002	0.006	0.010
S1A-18	0.002	0.000	0.002	0.004	0.008	0.012	0.000	0.002	0.003	0.006	0.000	0.003	0.007	0.012
S1A-19	0.003	0.000	0.002	0.003	0.009	0.013	0.000	0.001	0.004	0.006	0.000	0.002	0.007	0.010
S1A-20	0.002	0.000	0.001	0.002	0.006	0.010	0.000	0.000	0.001	0.001	0.000	0.002	0.004	0.007
Average	0.002	0.000	0.002	0.003	0.008	0.012	0.000	0.001	0.003	0.005	0.000	0.002	0.006	0.010

COUPON A1A

Coupon A1A: Encoded Data

Encoded Data	Vibropeen	Steel Stamp	Deep Laser Engrave				Dot Peen				Micro Mill			
	Mark 1	Mark 1	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4
A1A-17	7052861758	2137359451	1357924680	1357924707	1357924734	1357924761	3876939696	9638709263	4608240041	306010914	9524974623	1276607580	4638258921	9610227327
A1A-18	8728114548	5549709684	1357924683	1357924710	1357924737	1357924764	2916015960	7540047118	8545507258	374343981	1787249936	8260488435	2242652223	6779980031
A1A-19	3847679451	6095147823	1357924685	1357924712	1357924739	1357924766	8214872322	6249475777	4028524204	7481103274	1983908122	2526692356	6486358313	4518394282
A1A-20	4206867453	9281297644	1357924687	1357924714	1357924741	1357924768	2309883702	776926648	3009740725	7538020209	4694896041	2039952643	4401637474	1169583898

Coupon A1A: Decoding Data Before Processing

Coupon A1A-17

MXi Handheld Reader	Vibropeen	Steel Stamp	Deep Laser Engrave				Dot Peen				Micro Mill				Time (s)
	Mark 1	Mark 1	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	
Operator 1 - Read 1	NA	NA	1357924680	1357924707	1357924734	1357924761	3876939696	9638709263	X	306010914	9524974623	1276607580	X	X	240
Operator 1 - Read 2	NA	NA	1357924680	1357924707	1357924734	1357924761	3876939696	9638709263	X	306010914	9524974623	1276607580	X	X	
Operator 1 - Read 3	NA	NA	1357924680	1357924707	1357924734	1357924761	3876939696	9638709263	4608240041	306010914	9524974623	1276607580	4638258921	9610227327	
Operator 1 - Read 4	NA	NA	1357924680	1357924707	1357924734	1357924761	3876939696	9638709263	4608240041	306010914	9524974623	1276607580	4638258921	9610227327	
Operator 1 - Read 5	NA	NA	1357924680	1357924707	1357924734	1357924761	3876939696	9638709263	4608240041	306010914	9524974623	1276607580	4638258921	9610227327	
Operator 1 - Read 6	NA	NA	1357924680	1357924707	1357924734	1357924761	3876939696	9638709263	4608240041	306010914	9524974623	1276607580	4638258921	9610227327	
Operator	**Vibropeen**	**Steel Stamp**	**Deep Laser Engrave**				**Dot Peen**				**Micro Mill**				**Time (s)**
	Mark 1	**Mark 1**	**Mark 1**	**Mark 2**	**Mark 3**	**Mark 4**	**Mark 1**	**Mark 2**	**Mark 3**	**Mark 4**	**Mark 1**	**Mark 2**	**Mark 3**	**Mark 4**	
Operator 1 - Read 1	7052861758	2137359451	1357924680	1357924707	1357924734	1357924761	3876939696	9638709263	4608240041	306010914	9524974623	1276607580	4638258921	9610227327	240
Operator 1 - Read 2	7052861758	2137359451	1357924680	1357924707	1357924734	1357924761	3876939696	9638709263	4608240041	306010914	9524974623	1276607580	4638258921	9610227327	
Operator 2 - Read 1	7052861758	2137359451	1357924680	1357924707	1357924734	1357924761	3876939696	9638709263	4608240041	306010914	9524974623	1276607580	4638258921	9610227327	285
Operator 2 - Read 2	7052861758	2137359451	1357924680	1357924707	1357924734	1357924761	3876939696	9638709263	4608240041	306010914	9524974623	1276607580	4638258921	9610227327	
Operator 3 - Read 1	7052861758	2137359451	1357924680	1357924707	1357924734	1357924761	3876939696	9638709263	4608240041	306010914	9524974623	1276607580	4638258921	9610227327	315
Operator 3 - Read 2	7052861758	2137359451	1357924680	1357924707	1357924734	1357924761	3876939696	9638709263	4608240041	306010914	9524974623	1276607580	4638258921	9610227327	

Coupon A1A-18

MXi Handheld Reader	Vibropeen	Steel Stamp	Deep Laser Engrave				Dot Peen				Micro Mill				Time (s)
	Mark 1	Mark 1	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	
Operator 1 - Read 1	NA	NA	1357924683	1357924710	1357924737	1357924764	2916015960	7540047118	8545507258	374343981	1787249936	8260488435	2242652223	X	210
Operator 1 - Read 2	NA	NA	1357924683	1357924710	1357924737	1357924764	2916015960	7540047118	8545507258	374343981	1787249936	8260488435	2242652223	X	
Operator 1 - Read 3	NA	NA	1357924683	1357924710	1357924737	1357924764	2916015960	7540047118	8545507258	374343981	1787249936	8260488435	2242652223	6779980031	
Operator 1 - Read 4	NA	NA	1357924683	1357924710	1357924737	1357924764	2916015960	7540047118	8545507258	374343981	1787249936	8260488435	2242652223	6779980031	
Operator 1 - Read 5	NA	NA	1357924683	1357924710	1357924737	1357924764	2916015960	7540047118	8545507258	374343981	1787249936	8260488435	2242652223	6779980031	
Operator 1 - Read 6	NA	NA	1357924683	1357924710	1357924737	1357924764	2916015960	7540047118	8545507258	374343981	1787249936	8260488435	2242652223	6779980031	
Operator	**Vibropeen**	**Steel Stamp**	**Deep Laser Engrave**				**Dot Peen**				**Micro Mill**				**Time (s)**
	Mark 1	**Mark 1**	**Mark 1**	**Mark 2**	**Mark 3**	**Mark 4**	**Mark 1**	**Mark 2**	**Mark 3**	**Mark 4**	**Mark 1**	**Mark 2**	**Mark 3**	**Mark 4**	
Operator 1 - Read 1	8728114548	5549709684	1357924683	1357924710	1357924737	1357924764	2916015960	7540047118	8545507258	374343981	1787249936	8260488435	2242652223	6779980031	240
Operator 1 - Read 2	8728114548	5549709684	1357924683	1357924710	1357924737	1357924764	2916015960	7540047118	8545507258	374343981	1787249936	8260488435	2242652223	6779980031	
Operator 2 - Read 1	8728114548	5549709684	1357924683	1357924710	1357924737	1357924764	2916015960	7540047118	8545507258	374343981	1787249936	8260488435	2242652223	6779980031	285
Operator 2 - Read 2	8728114548	5549709684	1357924683	1357924710	1357924737	1357924764	2916015960	7540047118	8545507258	374343981	1787249936	8260488435	2242652223	6779980031	
Operator 3 - Read 1	8728114548	5549709684	1357924683	1357924710	1357924737	1357924764	2916015960	7540047118	8545507258	374343981	1787249936	8260488435	2242652223	6779980031	330
Operator 3 - Read 2	8728114548	5549709684	1357924683	1357924710	1357924737	1357924764	2916015960	7540047118	8545507258	374343981	1787249936	8260488435	2242652223	6779980031	

Coupon A1A-19

MXi Handheld Reader	Vibropeen	Steel Stamp	Deep Laser Engrave				Dot Peen				Micro Mill				Time (s)
	Mark 1	Mark 1	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	
Operator 1 - Read 1	NA	NA	1357924685	1357924712	1357924739	1357924766	8214872322	6249475777	4028524204	X	1983908122	2526692356	6486358313	X	240
Operator 1 - Read 2	NA	NA	1357924685	1357924712	1357924739	1357924766	8214872322	6249475777	4028524204	X	1983908122	2526692356	6486358313	X	
Operator 1 - Read 3	NA	NA	1357924685	1357924712	1357924739	1357924766	8214872322	6249475777	4028524204	X	1983908122	2526692356	6486358313	4518394282	
Operator 1 - Read 4	NA	NA	1357924685	1357924712	1357924739	1357924766	8214872322	6249475777	4028524204	X	1983908122	2526692356	6486358313	4518394282	
Operator 1 - Read 5	NA	NA	1357924685	1357924712	1357924739	1357924766	8214872322	6249475777	4028524204	7481103274	1983908122	2526692356	6486358313	4518394282	
Operator 1 - Read 6	NA	NA	1357924685	1357924712	1357924739	1357924766	8214872322	6249475777	4028524204	7481103274	1983908122	2526692356	6486358313	4518394282	
Operator	**Vibropeen**	**Steel Stamp**	**Deep Laser Engrave**				**Dot Peen**				**Micro Mill**				**Time (s)**
	Mark 1	**Mark 1**	**Mark 1**	**Mark 2**	**Mark 3**	**Mark 4**	**Mark 1**	**Mark 2**	**Mark 3**	**Mark 4**	**Mark 1**	**Mark 2**	**Mark 3**	**Mark 4**	
Operator 1 - Read 1	3847679451	6095147823	1357924685	1357924712	1357924739	1357924766	8214872322	6249475777	4028524204	7481103274	1983908122	2526692356	6486358313	4518394282	240
Operator 1 - Read 2	3847679451	6095147823	1357924685	1357924712	1357924739	1357924766	8214872322	6249475777	4028524204	7481103274	1983908122	2526692356	6486358313	4518394282	
Operator 2 - Read 1	3847679451	6095147823	1357924685	1357924712	1357924739	1357924766	8214872322	6249475777	4028524204	7481103274	1983908122	2526692356	6486358313	4518394282	255
Operator 2 - Read 2	3847679451	6095147823	1357924685	1357924712	1357924739	1357924766	8214872322	6249475777	4028524204	7481103274	1983908122	2526692356	6486358313	4518394282	
Operator 3 - Read 1	3847679451	6095147823	1357924685	1357924712	1357924739	1357924766	8214872322	6249475777	4028524204	7481103274	1983908122	2526692356	6486358313	4518394282	360
Operator 3 - Read 2	3847679451	6095147823	1357924685	1357924712	1357924739	1357924766	8214872322	6249475777	4028524204	7481103274	1983908122	2526692356	6486358313	4518394282	

Coupon A1A-20

MXi Handheld Reader	Vibropeen	Steel Stamp	Deep Laser Engrave				Dot Peen				Micro Mill				Time (s)
	Mark 1	Mark 1	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	
Operator 1 - Read 1	NA	NA	1357924687	1357924714	1357924741	1357924768	X	776926648	3009740725	X	4694896041	2039952643	X	X	265
Operator 1 - Read 2	NA	NA	1357924687	1357924714	1357924741	1357924768	X	776926648	3009740725	X	4694896041	2039952643	X	X	
Operator 1 - Read 3	NA	NA	1357924687	1357924714	1357924741	1357924768	2309883702	776926648	3009740725	X	4694896041	2039952643	4401637474	1169583898	
Operator 1 - Read 4	NA	NA	1357924687	1357924714	1357924741	1357924768	2309883702	776926648	3009740725	X	4694896041	2039952643	4401637474	1169583898	
Operator 1 - Read 5	NA	NA	1357924687	1357924714	1357924741	1357924768	2309883702	776926648	3009740725	7538020209	4694896041	2039952643	4401637474	1169583898	
Operator 1 - Read 6	NA	NA	1357924687	1357924714	1357924741	1357924768	2309883702	776926648	3009740725	7538020209	4694896041	2039952643	4401637474	1169583898	
Operator	**Vibropeen**	**Steel Stamp**	**Deep Laser Engrave**				**Dot Peen**				**Micro Mill**				**Time (s)**
	Mark 1	**Mark 1**	**Mark 1**	**Mark 2**	**Mark 3**	**Mark 4**	**Mark 1**	**Mark 2**	**Mark 3**	**Mark 4**	**Mark 1**	**Mark 2**	**Mark 3**	**Mark 4**	
Operator 1 - Read 1	4206867453	9281297644	1357924687	1357924714	1357924741	1357924768	2309883702	776926648	3009740725	7538020209	4694896041	2039952643	4401637474	1169583898	240
Operator 1 - Read 2	4206867453	9281297644	1357924687	1357924714	1357924741	1357924768	2309883702	776926648	3009740725	7538020209	4694896041	2039952643	4401637474	1169583898	
Operator 2 - Read 1	4206867453	9281297644	1357924687	1357924714	1357924741	1357924768	2309883702	776926648	3009740725	7538020209	4694896041	2039952643	4401637474	1169583898	240
Operator 2 - Read 2	4206867453	9281297644	1357924687	1357924714	1357924741	1357924768	2309883702	776926648	3009740725	7538020209	4694896041	2039952643	4401637474	1169583898	
Operator 3 - Read 1	4206867453	9281297644	1357924687	1357924714	1357924741	1357924768	2309883702	776926648	3009740725	7538020209	4694896041	2039952643	4401637474	1169583898	360
Operator 3 - Read 2	4206867453	9281297644	1357924687	1357924714	1357924741	1357924768	2309883702	776926648	3009740725	7538020209	4694896041	2039952643	4401637474	1169583898	

Coupon A1A: Summary of Decoding Data Before Processing

MRM	Vibropeen	Steel Stamp	Deep Laser Engrave				Dot Peen				Micro Mill				Average
	Mark 1	Mark 1	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Time (s)
A1A-17	NA	NA	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	3.3
A1A-18	NA	NA	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	2.9
A1A-19	NA	NA	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	3.3
A1A-20	NA	NA	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	3.7
HRM	**Vibropeen**	**Steel Stamp**	**Deep Laser Engrave**				**Dot Peen**				**Micro Mill**				**Average**
	Mark 1	**Mark 1**	**Mark 1**	**Mark 2**	**Mark 3**	**Mark 4**	**Mark 1**	**Mark 2**	**Mark 3**	**Mark 4**	**Mark 1**	**Mark 2**	**Mark 3**	**Mark 4**	**Time (s)**
A1A-17	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	10.0
A1A-18	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	10.2
A1A-19	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	10.2
A1A-20	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	10.0

Coupon A1A: Depth Data Before Processing

Coupon A1A-17

Depth Gage	Vibropeen	Steel Stamp	Deep Laser Engrave				Dot Peen				Micro Mill			
	Mark 1	Mark 1	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4
Measurement 1	0.0065	0.0090	0.0015	0.0030	0.0060	0.0120	0.0005	0.0030	0.0070	0.0100	0.0015	0.0030	0.0070	0.0115
Measurement 2	0.0060	0.0070	0.0020	0.0030	0.0065	0.0115	0.0010	0.0025	0.0075	0.0100	0.0020	0.0030	0.0070	0.0110
Measurement 3	0.0040	0.0070	0.0020	0.0030	0.0070	0.0120	0.0010	0.0030	0.0065	0.0110	0.0020	0.0025	0.0060	0.0110

Coupon A1A-18

Depth Gage	Vibropeen	Steel Stamp	Deep Laser Engrave				Dot Peen				Micro Mill			
	Mark 1	Mark 1	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4
Measurement 1	0.0040	0.0070	0.0015	0.0030	0.0060	0.0110	0.0010	0.0025	0.0070	0.0110	0.0015	0.0035	0.0075	0.0130
Measurement 2	0.0045	0.0100	0.0015	0.0025	0.0070	0.0110	0.0005	0.0020	0.0080	0.0120	0.0015	0.0040	0.0080	0.0130
Measurement 3	0.0040	0.0075	0.0010	0.0030	0.0070	0.0120	0.0005	0.0020	0.0070	0.0110	0.0020	0.0035	0.0080	0.0130

Coupon A1A-19

Depth Gage	Vibropeen	Steel Stamp	Deep Laser Engrave				Dot Peen				Micro Mill			
	Mark 1	Mark 1	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4
Measurement 1	0.0070	0.0080	0.0015	0.0030	0.0070	0.0120	0.0010	0.0020	0.0070	0.0120	0.0020	0.0045	0.0070	0.0115
Measurement 2	0.0060	0.0100	0.0020	0.0030	0.0075	0.0120	0.0010	0.0020	0.0085	0.0115	0.0020	0.0030	0.0070	0.0115
Measurement 3	0.0090	0.0090	0.0010	0.0030	0.0070	0.0120	0.0010	0.0015	0.0080	0.0110	0.0015	0.0040	0.0075	0.0120

Coupon A1A-20

Depth Gage	Vibropeen	Steel Stamp	Deep Laser Engrave				Dot Peen				Micro Mill			
	Mark 1	Mark 1	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4
Measurement 1	0.0060	0.0120	0.0015	0.0030	0.0070	0.0120	0.0010	0.0045	0.0070	0.0120	0.0020	0.0030	0.0075	0.0110
Measurement 2	0.0060	0.0095	0.0020	0.0040	0.0070	0.0120	0.0015	0.0040	0.0070	0.0125	0.0015	0.0025	0.0070	0.0105
Measurement 3	0.0065	0.0080	0.0015	0.0025	0.0070	0.0120	0.0015	0.0030	0.0070	0.0130	0.0010	0.0030	0.0075	0.0110

Coupon A1A: Summary of Depth Data Before Processing

Coupon	Vibropeen	Steel Stamp	Deep Laser Engrave				Dot Peen				Micro Mill			
	Mark 1	Mark 1	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4
A1A-17	0.006	0.008	0.002	0.003	0.007	0.012	0.001	0.003	0.007	0.010	0.002	0.003	0.007	0.011
A1A-18	0.004	0.008	0.001	0.003	0.007	0.011	0.001	0.002	0.007	0.011	0.002	0.004	0.008	0.013
A1A-19	0.007	0.009	0.002	0.003	0.007	0.012	0.001	0.002	0.008	0.012	0.002	0.004	0.007	0.012
A1A-20	0.006	0.010	0.002	0.003	0.007	0.012	0.001	0.004	0.007	0.013	0.002	0.003	0.007	0.011
Average	0.006	0.009	0.002	0.003	0.007	0.012	0.001	0.003	0.007	0.011	0.002	0.003	0.007	0.012

Coupon A1A: Encoded Data

Encoded Data	Vibropeen	Steel Stamp	Deep Laser Engrave				Dot Peen				Micro Mill			
	Mark 1	Mark 1	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4
A1A-17	7052861758	2137359451	1357924680	1357924707	1357924734	1357924761	3876939696	9638709263	4608240041	306010914	9524974623	1276607580	4638258921	9610227327
A1A-18	8728114548	5549709684	1357924683	1357924710	1357924737	1357924764	2916015960	7540047118	8545507258	374343981	1787249936	8260488435	2242652223	6779980031
A1A-19	3847679451	6095147823	1357924685	1357924712	1357924739	1357924766	8214872322	6249475777	4028524204	7481103274	1983908122	2526692356	6486358313	4518394282
A1A-20	4206867453	9281297644	1357924687	1357924714	1357924741	1357924768	2309883702	776926648	3009740725	7538020209	4694896041	2039952643	4401637474	1169583898

Coupon A1A: Decoding Data After Processing

Coupon A1A-17

MXi Handheld Reader	Vibropeen	Steel Stamp	Deep Laser Engrave				Dot Peen				Micro Mill				Time (s)
	Mark 1	Mark 1	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	
Operator 1 - Read 1	NA	NA	1357924680	1357924707	1357924734	1357924761	3876939696	9638709263	4608240041	306010914	9524974623	1276607580	4638258921	9610227327	270
Operator 1 - Read 2	NA	NA	1357924680	1357924707	1357924734	1357924761	3876939696	9638709263	4608240041	306010914	9524974623	1276607580	4638258921	9610227327	
Operator 1 - Read 3	NA	NA	1357924680	1357924707	1357924734	1357924761	3876939696	9638709263	4608240041	306010914	9524974623	1276607580	4638258921	9610227327	
Operator 1 - Read 4	NA	NA	1357924680	1357924707	1357924734	1357924761	3876939696	9638709263	4608240041	306010914	9524974623	1276607580	4638258921	9610227327	
Operator 1 - Read 5	NA	NA	1357924680	1357924707	1357924734	1357924761	3876939696	9638709263	4608240041	306010914	9524974623	1276607580	4638258921	9610227327	
Operator 1 - Read 6	NA	NA	1357924680	1357924707	1357924734	1357924761	3876939696	9638709263	4608240041	306010914	9524974623	1276607580	4638258921	9610227327	
Operator	Vibropeen	Steel Stamp	Deep Laser Engrave				Dot Peen				Micro Mill				Time (s)
	Mark 1	Mark 1	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	
Operator 1 - Read 1	7052861758	2137359451	1357924680	1357924707	1357924734	1357924761	3876939696	9638709263	4608240041	306010914	9524974623	1276607580	4638258921	9610227327	345
Operator 1 - Read 2	7052861758	2137359451	1357924680	1357924707	1357924734	1357924761	3876939696	9638709263	4608240041	306010914	9524974623	1276607580	4638258921	9610227327	
Operator 2 - Read 1	7052861758	2137359451	1357924680	1357924707	1357924734	1357924761	3876939696	9638709263	4608240041	306010914	9524974623	1276607580	4638258921	9610227327	225
Operator 2 - Read 2	7052861758	2137359451	1357924680	1357924707	1357924734	1357924761	3876939696	9638709263	4608240041	306010914	9524974623	1276607580	4638258921	9610227327	
Operator 3 - Read 1	7052861758	2137359451	1357924680	1357924707	1357924734	1357924761	3876939696	9638709263	4608240041	306010914	9524974623	1276607580	4638258921	9610227327	270
Operator 3 - Read 2	7052861758	2137359451	1357924680	1357924707	1357924734	1357924761	3876939696	9638709263	4608240041	306010914	9524974623	1276607580	4638258921	9610227327	

Coupon A1A-18

MXi Handheld Reader	Vibropeen	Steel Stamp	Deep Laser Engrave				Dot Peen				Micro Mill				Time (s)
	Mark 1	Mark 1	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	
Operator 1 - Read 1	NA	NA	X	X	X	X	X	X	X	X	X	X	X	X	240
Operator 1 - Read 2	NA	NA	X	X	X	X	X	X	X	X	X	X	X	X	
Operator 1 - Read 3	NA	NA	X	X	X	X	X	X	X	X	X	X	X	X	
Operator 1 - Read 4	NA	NA	X	X	X	X	X	X	X	X	X	X	X	X	
Operator 1 - Read 5	NA	NA	X	X	X	X	X	X	X	X	X	X	X	X	
Operator 1 - Read 6	NA	NA	X	X	X	X	X	X	X	X	X	X	X	X	
Operator	Vibropeen	Steel Stamp	Deep Laser Engrave				Dot Peen				Micro Mill				Time (s)
	Mark 1	Mark 1	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	
Operator 1 - Read 1	X	5542709684	X	X	X	X	X	X	X	X	X	X	2242552223	X	105
Operator 1 - Read 2	X	5543709684	X	X	X	X	X	X	X	X	X	X	2242662223	X	
Operator 2 - Read 1	X	5543709684	X	X	X	X	X	X	X	X	X	X	2242652223	X	90
Operator 2 - Read 2	X	5542709694	X	X	X	X	X	X	X	X	X	X	2242692223	X	
Operator 3 - Read 1	X	X	X	X	X	X	X	X	X	X	X	X	224265223	X	60
Operator 3 - Read 2	X	X	X	X	X	X	X	X	X	X	X	X	224265223	X	

Coupon A1A-19

MXi Handheld Reader	Vibropeen	Steel Stamp	Deep Laser Engrave				Dot Peen				Micro Mill				Time (s)
	Mark 1	Mark 1	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	
Operator 1 - Read 1	NA	NA	1357924685	1357924712	1357924739	1357924766	X	6249475777	4028524204	7481103274	1983908122	2526692356	6486358313	4518394282	255
Operator 1 - Read 2	NA	NA	1357924685	1357924712	1357924739	1357924766	X	6249475777	4028524204	7481103274	1983908122	2526692356	6486358313	4518394282	
Operator 1 - Read 3	NA	NA	1357924685	1357924712	1357924739	1357924766	X	6249475777	4028524204	7481103274	1983908122	2526692356	6486358313	4518394282	
Operator 1 - Read 4	NA	NA	1357924685	1357924712	1357924739	1357924766	X	6249475777	4028524204	7481103274	1983908122	2526692356	6486358313	4518394282	
Operator 1 - Read 5	NA	NA	1357924685	1357924712	1357924739	1357924766	X	6249475777	4028524204	7481103274	1983908122	2526692356	6486358313	4518394282	
Operator 1 - Read 6	NA	NA	1357924685	1357924712	1357924739	1357924766	X	6249475777	4028524204	7481103274	1983908122	2526692356	6486358313	4518394282	
Operator	Vibropeen	Steel Stamp	Deep Laser Engrave				Dot Peen				Micro Mill				Time (s)
	Mark 1	Mark 1	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	
Operator 1 - Read 1	3847679451	6095147823	1357924685	1357924712	1357924739	1357924766	8214872322	6249475777	4028524204	7481103274	1983908122	2526692356	6486358313	4518394282	330
Operator 1 - Read 2	3847679451	6095147823	1357924685	1357924712	1357924739	1357924766	8214872322	6249475777	4028524204	7481103274	1983908122	2526692356	6486358313	4518394282	
Operator 2 - Read 1	3847679451	6095147823	1357924685	1357924712	1357924739	1357924766	8214872322	6249475777	4028524204	7481103274	1983908122	2526692356	6486358313	4518394282	270
Operator 2 - Read 2	3847679451	6095147823	1357924685	1357924712	1357924739	1357924766	8214872322	6249475777	4028524204	7481103274	1983908122	2526692356	6486358313	4518394282	
Operator 3 - Read 1	3847679451	6095147823	13577924685	1357924712	1357924739	1357924766	8214872322	6249475777	4028524204	7481103274	1983908122	2526692356	6486358313	4518394282	360
Operator 3 - Read 2	3847679451	6095147823	13577924685	1357924712	1357924739	1357924766	8214872322	6249475777	4028524204	7481103274	1983908122	2526692356	6486358313	4518394282	

Coupon A1A-20

MXi Handheld Reader	Vibropeen	Steel Stamp	Deep Laser Engrave				Dot Peen				Micro Mill				Time (s)
	Mark 1	Mark 1	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	
Operator 1 - Read 1	NA	NA	X	X	X	X	X	X	X	X	X	X	X	X	225
Operator 1 - Read 2	NA	NA	X	X	X	X	X	X	X	X	X	X	X	X	
Operator 1 - Read 3	NA	NA	X	X	X	X	X	X	X	X	X	X	X	X	
Operator 1 - Read 4	NA	NA	X	X	X	X	X	X	X	X	X	X	X	X	
Operator 1 - Read 5	NA	NA	X	X	X	X	X	X	X	X	X	X	X	X	
Operator 1 - Read 6	NA	NA	X	X	X	X	X	X	X	X	X	X	X	X	
Operator	Vibropeen	Steel Stamp	Deep Laser Engrave				Dot Peen				Micro Mill				Time (s)
	Mark 1	Mark 1	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	
Operator 1 - Read 1	4206867453	9281297644	1357924687	1357924714	1357924741	1357924768	X	776926648	3009740725	7538020209	4694896041	2039952643	4401637474	1169583898	345
Operator 1 - Read 2	4206867453	9281297644	1357924687	1357924714	1357924741	1357924768	X	776926648	3009740725	7538020209	4694896041	2039952643	4401637474	1169583898	
Operator 2 - Read 1	4206867453	9281297644	1357924687	1357924714	1357924741	1357924768	X	776926648	3009740725	7538020209	4694896041	2039952643	4401637474	1169583898	300
Operator 2 - Read 2	4206867453	9281297644	1357924687	1357924714	1357924741	1357924768	X	776926648	3009740725	7538020209	4694895041	2039952643	4401637474	1169583898	
Operator 3 - Read 1	4206867453	9281297644	1357924687	1357924714	1357924741	1357924768	X	776926648	3009740725	7538020209	469485968	2039952643	4401637474	1169583898	330
Operator 3 - Read 2	4206867453	9281297644	1357924687	1357924714	1357924741	1357924768	X	776925548	3009740725	7538020209	4694885042	2039952643	4401637474	1169583898	

Coupon A1A: Summary of Decoding Data After Processing

MRM	Vibropeen	Steel Stamp	Deep Laser Engrave				Dot Peen				Micro Mill				Average
	Mark 1	Mark 1	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Time (s)
A1A-17	NA	NA	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	3.8
A1A-18	NA	NA	No	No	No	No	No	No	No	No	No	No	No	No	3.3
A1A-19	NA	NA	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	3.5
A1A-20	NA	NA	No	No	No	No	No	No	No	No	No	No	No	No	3.1
HRM	Vibropeen	Steel Stamp	Deep Laser Engrave				Dot Peen				Micro Mill				Average
	Mark 1	Mark 1	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Time (s)
A1A-17	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	10.0
A1A-18	No	No	No	No	No	No	No	No	No	No	No	No	No	No	3.0
A1A-19	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	11.4
A1A-20	No	No	No	Yes	Yes	No	No	No	Yes	Yes	No	Yes	No	Yes	11.6

Coupon A1A: Depth Data After Processing

Coupon A1A-17														
Depth Gage	Vibropeen	Steel Stamp	Deep Laser Engrave				Dot Peen				Micro Mill			
	Mark 1	Mark 1	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4
Measurement 1	0.0050	0.0080	0.0015	0.0030	0.0060	0.0095	0.0000	0.0030	0.0060	0.0110	0.0015	0.0030	0.0080	0.0115
Measurement 2	0.0070	0.0080	0.0015	0.0025	0.0060	0.0100	0.0005	0.0030	0.0060	0.0100	0.0015	0.0030	0.0075	0.0120
Measurement 3	0.0050	0.0090	0.0020	0.0030	0.0060	0.0095	0.0005	0.0035	0.0065	0.0110	0.0025	0.0030	0.0080	0.0110

Coupon A1A-18														
Depth Gage	Vibropeen	Steel Stamp	Deep Laser Engrave				Dot Peen				Micro Mill			
	Mark 1	Mark 1	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4
Measurement 1	0.0000	0.0040	0.0000	0.0010	0.0040	0.0050	0.0000	0.0000	0.0000	0.0030	0.0000	0.0000	0.0030	0.0070
Measurement 2	0.0010	0.0050	0.0000	0.0020	0.0030	0.0040	0.0000	0.0000	0.0005	0.0040	0.0000	0.0000	0.0020	0.0050
Measurement 3	0.0005	0.0040	0.0000	0.0010	0.0040	0.0040	0.0000	0.0000	0.0000	0.0020	0.0000	0.0000	0.0030	0.0060

Coupon A1A-19														
Depth Gage	Vibropeen	Steel Stamp	Deep Laser Engrave				Dot Peen				Micro Mill			
	Mark 1	Mark 1	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4
Measurement 1	0.0090	0.0050	0.0015	0.0030	0.0065	0.0100	0.0005	0.0010	0.0050	0.0110	0.0020	0.0040	0.0075	0.0110
Measurement 2	0.0050	0.0120	0.0015	0.0030	0.0065	0.0110	0.0000	0.0015	0.0055	0.0110	0.0020	0.0040	0.0080	0.0115
Measurement 3	0.0020	0.0080	0.0015	0.0030	0.0060	0.0110	0.0005	0.0010	0.0045	0.0100	0.0020	0.0035	0.0075	0.0110

Coupon A1A-20														
Depth Gage	Vibropeen	Steel Stamp	Deep Laser Engrave				Dot Peen				Micro Mill			
	Mark 1	Mark 1	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4
Measurement 1	0.0020	0.0050	0.0010	0.0020	0.0030	0.0050	0.0000	0.0000	0.0020	0.0040	0.0005	0.0010	0.0040	0.0050
Measurement 2	0.0010	0.0030	0.0010	0.0010	0.0030	0.0070	0.0000	0.0000	0.0010	0.0040	0.0000	0.0010	0.0030	0.0060
Measurement 3	0.0005	0.0030	0.0010	0.0015	0.0040	0.0050	0.0000	0.0005	0.0010	0.0030	0.0000	0.0005	0.0030	0.0050

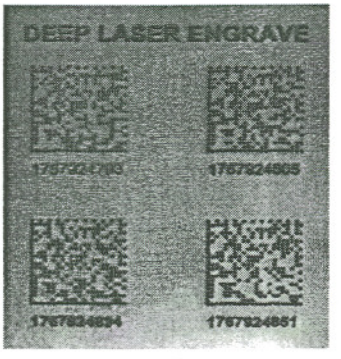
Coupon A1A: Summary of Depth Data After Processing

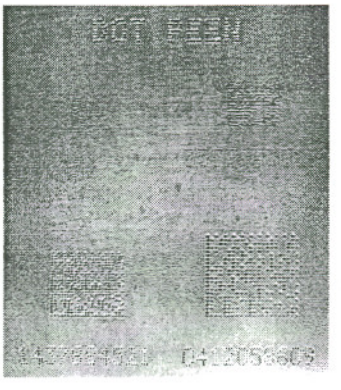
Coupon	Vibropeen	Steel Stamp	Deep Laser Engrave				Dot Peen				Micro Mill			
	Mark 1	Mark 1	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4	Mark 1	Mark 2	Mark 3	Mark 4
A1A-17	0.006	0.008	0.002	0.003	0.006	0.010	0.000	0.003	0.006	0.011	0.002	0.003	0.008	0.012
A1A-18	0.001	0.004	0.000	0.001	0.004	0.004	0.000	0.000	0.000	0.003	0.000	0.000	0.003	0.006
A1A-19	0.005	0.008	0.002	0.003	0.006	0.011	0.000	0.001	0.005	0.011	0.002	0.004	0.008	0.011
A1A-20	0.001	0.004	0.001	0.002	0.003	0.006	0.000	0.000	0.001	0.004	0.000	0.001	0.003	0.005
Average	0.003	0.006	0.001	0.002	0.005	0.008	0.000	0.001	0.003	0.007	0.001	0.002	0.005	0.009

APPENDIX G
COUPON MARK IMAGES

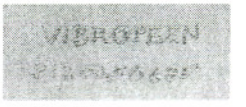
COUPON S1A

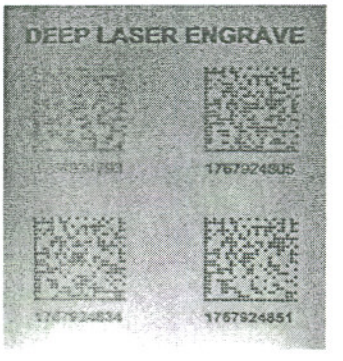
Coupon S1A-17 Before Processing



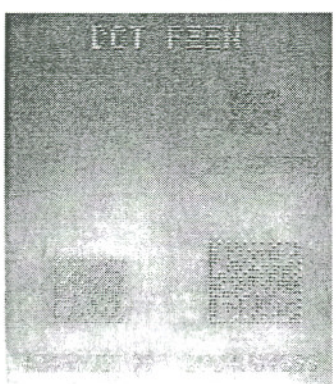


Coupon S1A-17 After Processing

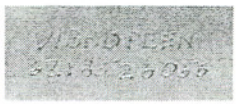


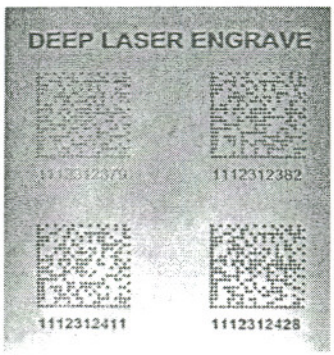


Coupon S1A-18 Before Processing

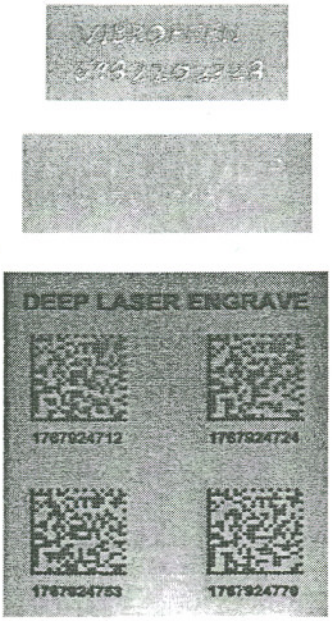


Coupon S1A-18 After Processing

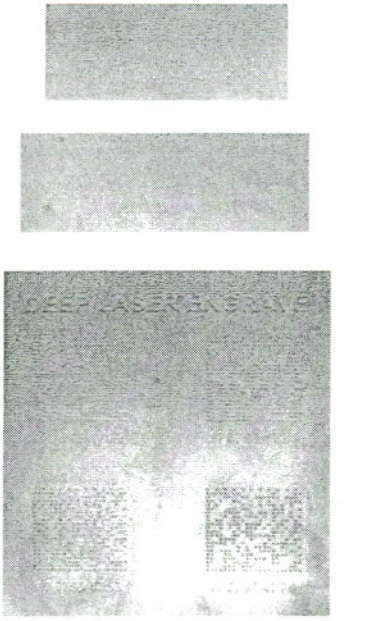




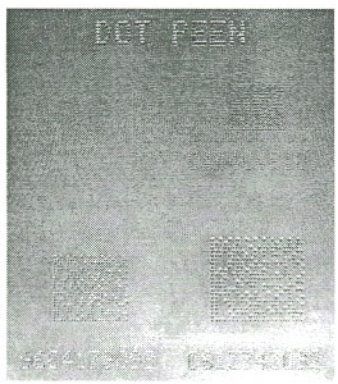
Coupon S1A-19 Before Processing



Coupon S1A-19 After Processing



Coupon S1A-20 Before Processing



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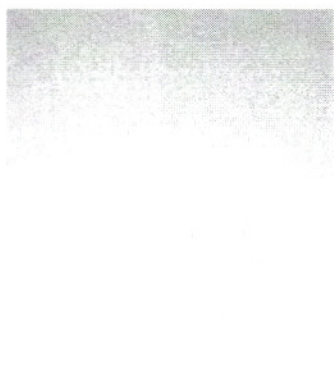

COUPON A1A

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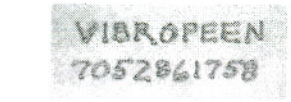

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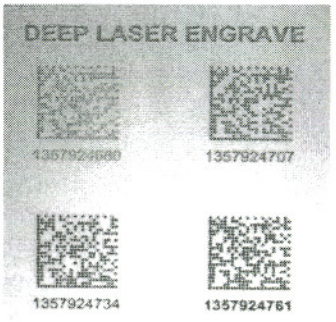

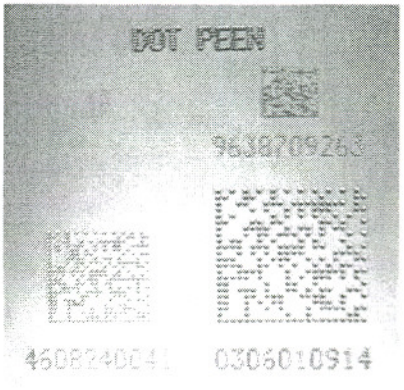

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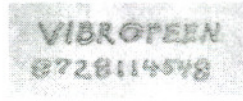

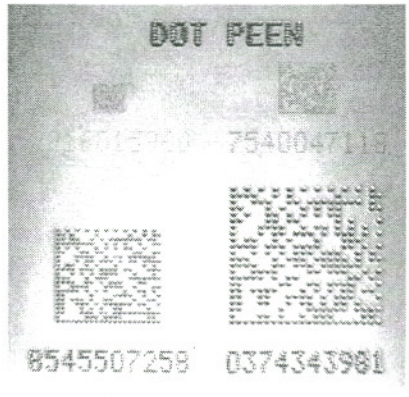

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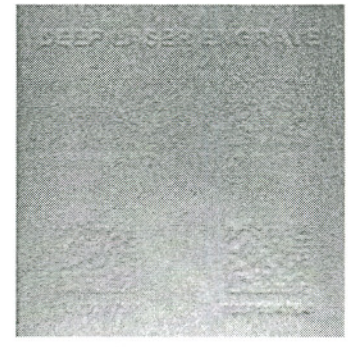

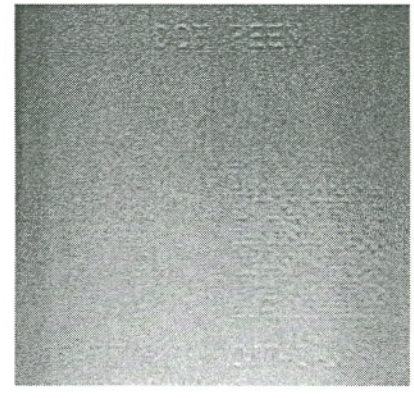

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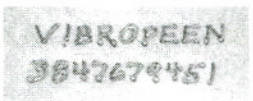
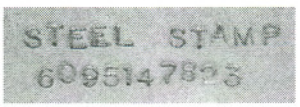
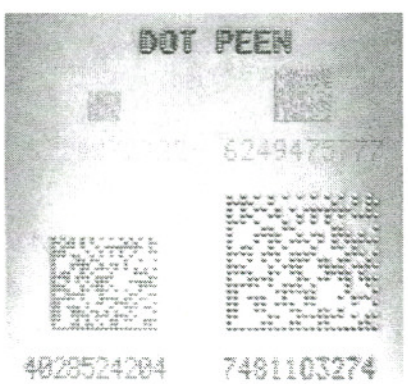
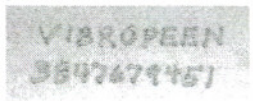
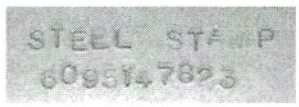


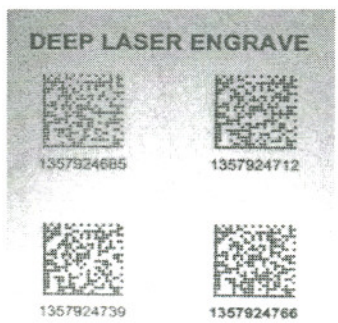


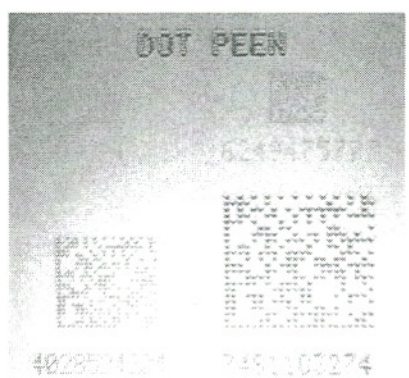


Coupon A1A-19 After Processing









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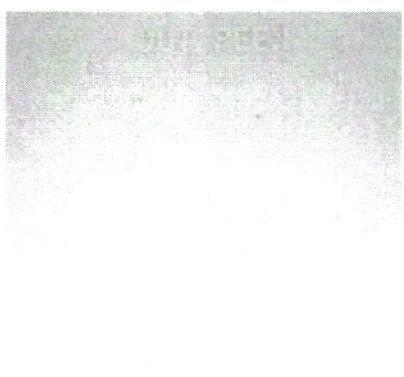
Coupon A1A-20 After Processing