

Subject: Cleveland Process Audit

Date: June 12, 2015

Completed By: Steve Busicnki

On June 12, 2015, work order CLV 56317 was ran on the CLO for American Roll Form. Tag DL66384 was verified prior to loading and use of the coil. The full coil width was measured at the beginning of the coil and gauge was measured with a micrometer. The width of each cut was then checked at the beginning of the coil. The gauge was measured again at the end of the first coil with a micrometer. Tag 215080 was then verified prior to loading and use of the coil. Camber was measured at the beginning of the second coil and gauge was checked with a micrometer. Gauge was measured again at the end of the second coil. The widths of each cut were measured with calipers at the end of the second coil.

Upon review of the gauge charts, it appears as though there is a discrepancy on the gauge of the material between the micrometer and the gauger. In conversation with the slitter supervisor, the gauger will be serviced and calibrated by the gauger company in order to provide accurate readings.

Part Spec/PO Audit Form

Cust #	1451	Customer	Am. Roll	Grp/Sz/Grd/Width	GVC/0.0840/CB90NO/2.9520
Equip/Plant	PWC CLO	Work Order #	CLV 56317	Part No.	GVC .086 X 2.952 X Coil
		Date	6/12/2015		
Work Order Information		Material to be Used		Actual	
	Tag #1	DL66384	Tag #2	Gauge #1	.085, .086/.0855, .0865 Gauge #2
	PO#	21963-001	PO#	% Gauge In Spec	69.40% % Gauge In Spec
Gauge Range	0.0840 - 0.0890	Gauge Min	.0840 Min	Low/High Gauge	Low/High Gauge
Width Range	2.947 - 2.957	Width	47.9900"	Average	0.0862/0.0904
Length Range	Coil			Width	0.0887 Average
Rockwell	45.00 - 60.00	Rockwell	Rockwell	Length	2.9530 Width
Tensile				Rockwell	Coil Length
Yield		A 653 Galvanized	A 653 Galvanized	Camb	52 Rockwell
% Elongation		Coil CS-B G90	Coil CS-B G90		< .12 Camb
Chem Rqmts		NCT LT Oil	NCT LT Oil		
Other Rqmts		.0840Min X	.0840 Min X		
Camb	0.00 - .12	47.9900"	47.9900"	Other	
		1pc 23,470lbs	1pc 21,830lbs		
Summary					
Actions					
Final Status					

Slit Size Inspection

Date: Jun. 10, 2015

Work Order: CW150371

Size of Cuts	Beginning Width	Mics	(Paxson Only) Middle Mics	End Width	Mics
2.952	2.954		OL#1 L.12	2.954	
	2.953			L.12 2.953	
	2.954			2.954	
	2.953			2.953	
	2.953			2.953	
	2.952	#1	L.12	2.952	#1
	2.954	.085		L.12 2.954	#1
	2.954			2.954	.085.5
	2.954	.084		2.954	
	2.953		L.12	2.953	.086.5
	2.953	#4		L.12 2.953	
	2.954	.084		2.954	
	2.953	.085.5		2.953	
	2.954			L.12 2.954	
	2.953		L.12	2.953	

DO ANY CUTS HAVE:

Rust/Stain

Burrs

Knife Marks

OK

Initials

J.P.

Slitting Order

Date: 6/12/15	Customer: Air Roll
Work Order #: CLV 56317	Date Run: June 12, 2015

Incoming Inspection Checklist

Tag #	Gauge & Width	Type	Tag Wgt.	RB	Olsen	Actual Wgt.	Width	Mic
DL66384	.084 x 47.990	QOC	23,470	52	—	23,470	48 1/16	.085
DL66385	—	—	23,470	—	—	23,470	—	.084
215080	.084 x 47.990	QOC	22,272	53.5	—	22,272	48 1/16	.084
								.085.5

Cutting Instructions: 16 CUTS 2.952

Slit Tolerance: 4 - .005	Max O.D: ST Thru	Max Skid Wgt: 5,000	I.D: 20"
Gauge Range: .084 / .089	Salesman:		

Special Instructions:

1 Cuts with some defect but okay to ship

_____ Cut Size
 _____ Cut Weight
 _____ Defect
 _____ Approved By

2 Cuts Rejected

_____ Cut Size
 _____ Cut Weight
 _____ Tag No. or No.'s
 _____ Reason for Reject

3 Ok to move material for shipment or to Stock

(7) _____ Name
 6/15/15 _____ Date

AGT400 Coil Summary Report

Jemison Metals -- 60 Inch Loopco Slitter

Work Order: CLV 56317 Coil Number: DL66384

Customer Name: AM ROLL Heat Number: METNLK1460757

Product: G90 Galvanized Jun-12-15 1:23 PM to 1:29 PM (clock 6.8 min/ run 6.2 min) Shift: 1

Average Thickness and Tolerance Data

Target 0.0865 in Average 0.0887 in Average - Target 0.0022 in (2.54%)
Standard Deviation 0.0006 in (0.93%)

Length 1580 ft Above High Limit 0.0890 in 484 ft (30.6%)
Width 48.062 in In Tolerance 100.0% (63.8%)
Weight 22960 lbs Below Low Limit 0.0840 in 0 ft (0.0%)

Max Thickness 0.0909 in at 1311 ft Min Thickness 0.0868 in at 1573 ft
Head Scrap 1 ft Tail Scrap 13 ft

Statistical Process Control Data

Upper Control Limit 0.0911 in Upper Tolerance Limit 0.0890 in
X Double Bar 0.0887 in R Bar 0.0024 in
Lower Control Limit 0.0863 in Lower Tolerance Limit 0.0840 in

CR 96.0% (Capability Ratio %, 100/CP)

CP 1.042 (Process Capability, HiLim-LowLim/6*Sigma)

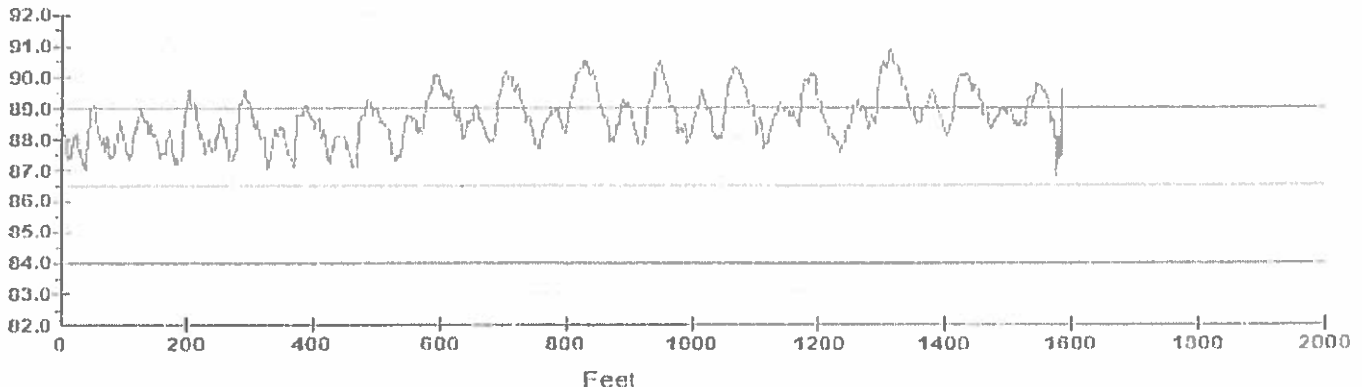
CPK 0.125 (Capability vs Limits) TMW Ratio 0.947 (Low Limit/Avg)

Thickness Distribution Relative to the Target

+1.1	0.0%
+0.0100	0.0%
+0.0090	0.0%
+0.0080	0.0%
+0.0070	0.0%
+0.0060	0.0%
+0.0050	0.0%
+0.0040	1.1%
+0.0030	17.8%
+0.0020	41.7%
+0.0010	13.4%
+0.0000	5.2%
-0.0010	0.0%
-0.0020	0.0%
-0.0030	0.0%
-0.0040	0.0%
-0.0050	0.0%
-0.0060	0.0%
-0.0070	0.0%
-0.0080	0.0%
-0.0090	0.0%
-0.0100	0.0%
---	0.0%

81.0% is within ± 0.0020 in of the target 100.0% is within ± 0.0050 in of the target
100.0% is within ± 0.0100 in of the target 100.0% is within ± 0.0200 in of the target

Thickness vs Length (Coil Number DL66384)



Gauge readings provided by Advanced Gauging Technologies, L.L.C. Plain City, OH 43064 USA Tel: (614) 873-6691

AGT400 Coil Summary Report

Jemison Metals -- 60 Inch Looeco Slitter

Work Order: CLV 56317 Coil Number: 215080

Customer Name: AM ROLL Heat Number: METNLK1460757

Product: G90 Galvanized Jun-12-15 2:00 PM to 2:09 PM (clock 9.0 min/ run 7.8 min) Shift: 1

Average Thickness and Tolerance Data

Target 0.0885 in Average 0.0883 in Average - Target 0.0018 in (2.10%)
Standard Deviation 0.0007 in (0.84%)

Length 1479 ft Above High Limit 0.0890 in 285 ft (19.3%)
Width 48.062 in In Tolerance 1191 ft (80.7%)
Weight 21401 lbs Below Low Limit 0.0840 in 0 ft (0.0%)

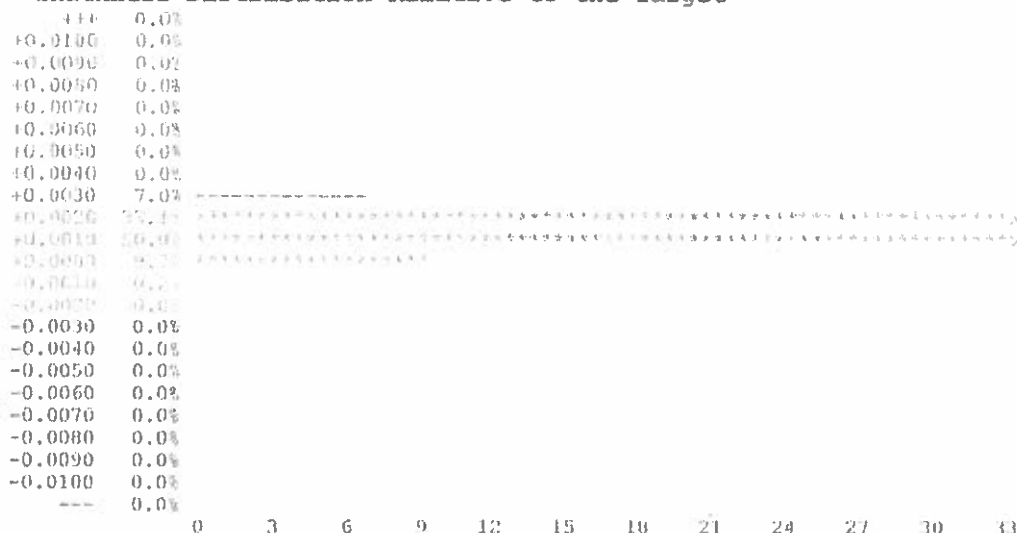
Max Thickness 0.0904 in at 97 ft Min Thickness 0.0862 in at 5 ft
Head Scrap 1 ft Tail Scrap 12 ft

Statistical Process Control Data

Upper Control Limit 0.0905 in Upper Tolerance Limit 0.0890 in
X Double Bar 0.0883 in R Bar 0.0022 in
Lower Control Limit 0.0861 in Lower Tolerance Limit 0.0840 in

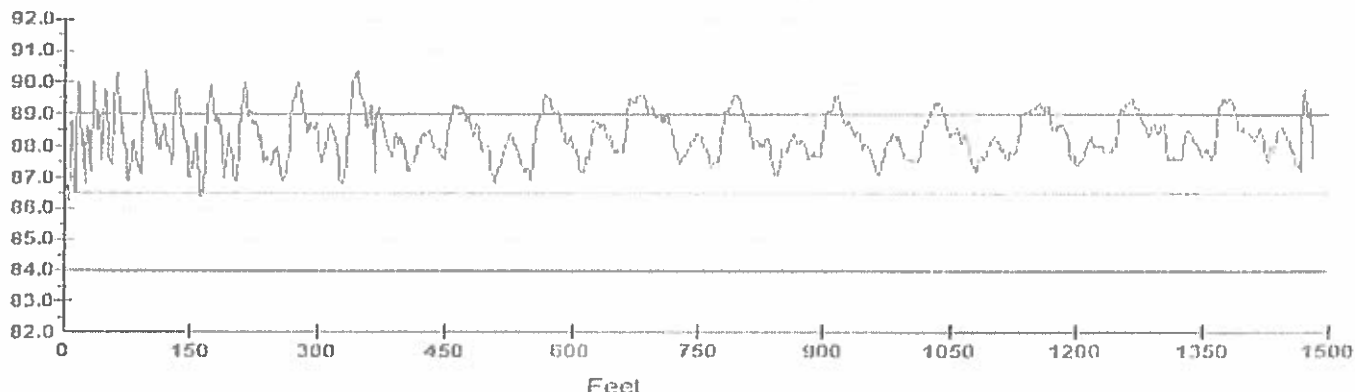
CR 87.6% (Capability Ratio %, 100/CP)
CP 1.142 (Process Capability, HiLim-LowLim/6*Sigma)
CPK 0.311 (Capability vs Limits) TMW Ratio 0.951 (Low Limit/Avg)

Thickness Distribution Relative to the Target



93.0% is within ± 0.0020 in of the target 100.0% is within ± 0.0050 in of the target
100.0% is within ± 0.0100 in of the target 100.0% is within ± 0.0200 in of the target

Thickness vs Length (Coil Number 215080)



AGT400 ISOcheck™ Report

Jemison Metals -- 60 Inch Loopco Slitter

Friday, June 12, 2015 6:23 AM

Internal Calibration Sample Checks

	Nominal Value	Measured Value	Tolerance	Status	Nominal A/D	Measured
Air	0.0000 in	0.0000 in	0.0002 in	In	61857	62737
Sample 1	0.0875 in	0.0875 in	0.0004 in	In	8488	8614
Sample 2	0.1611 in	0.1611 in	0.0008 in	In	1691	1734
Sample 3	0.2386 in	0.2386 in	0.0012 in	In	403	431
Shutter Closed					131	153

Calibration History

This AGT 400 was calibrated with external samples on Wednesday, March 18, 2015 at 8:13 AM

The calibration was verified and adjusted on Friday, June 12, 2015 at 6:22 AM

A successful ISOcheck™ was done on Friday, June 12, 2015 at 6:22 AM

The calibration constants are shown below

	Date	A1	A2	P1	% Deviation
Last External Calibration	03-18-2015	43.688	1.34E+2	0.780	0.18%
Last Internal Calibration	06-12-2015	43.641	1.80E+2	0.780	

DC Power Supply Checks

	Nominal Value	Measured Value	Tolerance	Status
Power Supply 1	13.20 volts	13.22 volts	0.50 volts	In
Power Supply 2A	5.00 volts	5.01 volts	0.25 volts	In
Power Supply 2B	-15.00 volts	-14.95 volts	0.25 volts	In
Power Supply 2C	15.00 volts	15.00 volts	0.25 volts	In
High Voltage Supply	-460 volts	-445 volts	25.00 volts	In