

Subject: Cleveland Process Audit

Date: November 24, 2015

Completed By: Steve Busicnki

On November 24, 2015, work order CLV 58223 was ran on the CR2 for Unified. Tag 67890 was verified prior to loading and use of the coil. One of the first pieces was measured for length, width and square using tape measure 1. Flatness was checked against the flatness table 092726 and the step gauge ST2 was available. Bow was checked at this time as well. The materials thickness was measured at both edges and the crown using micrometer ASP016. The same checks were done using the same devices for one of the pieces from the second bundle. The last bundle was just being completed when the shift ended and the last bundle had not yet been checked. Last bundle measurements are listed on the Quality Checklist and they are within the customer's specifications. Based on the gauge report, 95.5% of the gauge was within the customer range, with 4.5% representing the edge drop off associated with the edge of the steel. Micrometer readings verified material to be within specification.

Measuring Tools:

Tape – 1 last calibration 09/15 calibration due 12/15

Micrometer – ASP016 last calibration 11/15 calibration due 12/15

Flatness Table – 092726 last calibration 11/25/14 calibration due 11/25/19

Step Gauge – ST2 last calibration 03/11/15 calibration due 03/11/17

Controlled Documents:

CLV-RB-002 rev date 03/07/13

JDM13 rev date 11/30/12

Part Spec/PO Audit Form

Cust #	2801	Customer	Unified		
Equip/Plant	PWC CR2	Work Order #	CLV 58223	Date	11/24/2015
Work Order Information		Material to be Used			
		Tag #1	67890	Tag #2	
		PO#	22062-001	PO#	
Gauge Range	0.0236 - 0.0316	Gauge Min	.0236 Min	Gauge Min	
Width Range	48.0000 - 48.2500	Width	48.0000"	Width	
Length Range	144.0000 - 144.1250				
Rockwell		Rockwell		Rockwell	
Tensile					
Yield		A653 Galvannealed			
% Elongation		Coil CS-B			
Chem Rqmts		CT Dry			
Other Rqmts		.0236 Min X			
Bow	0.00 - .25	48.0000"			
Flatn	0.00 - .13				
		1pcs 12,890lbs			
Summary					
Actions					
Final Status					

Part Spec/PO Audit Form

Grp/Sz/Grd/Wdth	GNS/0.0276/CB40CD/48.0000		
Part No.	ST SHT1150		
Actual			
Gauge #1	0.024	Gauge #2	
% Gauge In Spec	95.50%	% Gauge In Spec	
Low/High Gauge	0.0231/0.0245	Low/High Gauge	
Average	0.0239	Average	
Width	48.0000	Width	
Length	144.0310	Length	
Rockwell		Rockwell	
Other			

Date: 11-24-15	Customer: Unified	Work Order # S6223	Machine # 2
Master Tag # C7890	Tag Weight: 12.890	Type: GNC-40CT	Ordered RB: me

Skid Tag#	Gauge Tolerance			Width Tol:	Length Tol:	Square Tol:	Flatness Tol:	Inspected By	Date
	Edge	Crown	Edge						
2796	024	024	024	± .05	+ .125 - .02	max	.13	James	11-24
Last piece of 1st bundle	024	024	024	48.00	96.00	0.02	<.120	James	11-24

[illegible]

Skid Tag#	Edge	Crown	Edge	Width	Length	Square	Flatness	Inspected By	Date
2799	024	024	024	48.00	144.031	662	+13	Donal	11-24
Last piece of last bundle	024	024	024	48.00	144.031	662	-13	Donal	11-24

AGT400 Coil Summary Report

Jemison Metals -- 75 Inch Red Bud CTL Line

Work Order: 58223 Coil Number: 67890

Customer Name: UNIFIED Heat Number: DUFUSLL63533 Vendor: DUFERCO

Product: Galvannealed Nov-24-15 12:51 PM to 1:28 PM (clock 36.6 min/ run 23.6 min) Shift: 1

Average Thickness and Tolerance Data

Target	0.0276 in	Average*	0.0239 in	Average - Target	-0.0037 in (!3.33%)
				Standard Deviation*	0.0002 in (0.73%)
Length	3213 ft	Above High Limit	0.0316 in	0 ft (0.0%)	
Width	48.000 in	In Tolerance		3067 ft (95.5%)	
Weight	12570 lbs	Below Low Limit	0.0236 in	148 ft (4.5%)	
Max Thickness	0.0245 in at	279 ft	Min Thickness	0.0231 in at	1114 ft
Head Scrap	10 ft		Tail Scrap	40 ft	

Statistical Process Control Data

CR	15.0%	(Capability Ratio %, 100/CP)		
CP	6.667	(Process Capability, HiLim-LoLim/6*Sigma)		
CPK	0.533	(Capability vs Limits)	TMW Ratio	0.987 (Low Limit/Avg)

Thickness Distribution Relative to the Target

+++	0.0%
+0.0050	0.0%
+0.0045	0.0%
+0.0040	0.0%
+0.0035	0.0%
+0.0030	0.0%
+0.0025	0.0%
+0.0020	0.0%
+0.0015	0.0%
+0.0010	0.0%
+0.0005	0.0%
+0.0000	0.0%
-0.0005	0.0%
-0.0010	0.0%
-0.0015	0.0%
-0.0020	0.0%
-0.0025	0.0%
-0.0030	0.0%
-0.0035	27.1% *****
-0.0040	68.4% *****>
-0.0045	4.5% -----
-0.0050	0.0%
---	0.0%
	0 3 6 9 12 15 18 21 24 27 30 33 %

0.0% is within ± 0.0010 in of the target 0.0% is within ± 0.0025 in of the target
100.0% is within ± 0.0050 in of the target 100.0% is within ± 0.0100 in of the target

Thickness vs Length (Coil Number 67890)

