

Subject: Cleveland Process Audit

Date: August 17, 2015

Completed By: Steve Busicnki

On August 17, 2015, work order CLV 57030 was ran on the CR2 for The Sheet. Tag DU67255 was verified prior to loading and use of the coil. There were a number of different sizes ran for this customer on this job. One of the first pieces produced was measured for length, width, square, flatness and wave. One of the first pieces for the next size was measured for length, width, square, flatness and wave. The last piece of this bundle was measured for length and width. The first piece of the third bundle was measured for length, width, square, flatness, wave and the gauge was measured manually. The last piece of this bundle was measured for length and width. The first piece of the fourth bundle was measured for length, width, square, flatness and wave. The same was done for the sixth and eighth bundles. The final bundle was checked measured for length, width, square, flatness and wave. Based on the gauge report, 82.4% of the material was within specification with an average thickness of 0.1720. This average is within the customers specification of 0.1713 – 0.1873.

Part Spec/PO Audit Form

Cust #	5922	Customer	The Sheet	Grp/Sz/Grd/Width	POS / 0.1713 / CSBTP / 100.0000
Equip/Plant	PWC CR2	Work Order #	CLV 57030	Part No.	HRPO 7GA 41 X 100
			Date	8/17/2015	
Work Order Information		Material to be Used		Actual	
		Tag #1	DU67255	Gauge #1	Gauge #2
		PO#	21943-001	% Gauge In Spec	% Gauge In Spec
Gauge Range	0.1713 - 0.1873	Gauge Min	.1683 Min	Low/High Gauge	Low/High Gauge
Width Range	40.9700 - 41.0300	Width	41.3750"	Average	Average
Length Range	99.9400 - 100.0600			Width	Width
Rockwell		Rockwell	Rockwell	Length	Length
Tensile				Rockwell	Rockwell
Yield		A1001 HRPO Coil			
% Elongation		CS Type B Temp			
Chem Rqmts		Pass			
Other Rqmts		.1683 Min X			
Wave	0.00 - .18	41.3750"		Other	
Flatness	0.00 - .18				
Square	0.00 - .18				
Summary					
Actions					
Final Status					

Quality Checklist

Date: 8-17-15 Customer: The Sheet Work Order # 57030 Machine # 2
 Master Tag #. 1X167255 Tag Weight: 38,400 Type: PCC Ordered RB: 144

Gauge Tolerance				Width Tol:	Length Tol:	Square Tol:	Flatness Tol:		
.1713				± .020	± .060	-.13	-.18		
Skid Tag#	Edge	Crown	Edge	Width	Length	Square	Flatness	Inspected By	Date
54837	172	173	172	41.00	92.084	15	< .120	Don mc	8-17
Last piece of 1st bundle	172	173	172	41.00	93.050	15	< .120	Don mc	8-17

Skid Tag#	Edge	Crown	Edge	Width	Length	Square	Flatness	Inspected By	Date
54837	172	173	172	41.00	92.084	15	< .120	Don mc	8-17
54846	172	173	172	41.00	100.00	093	< .120	Don mc	8-17
54842	172	173	171	41.00	96.50	031	< .120	Don mc	8-17
54844	172	173	172	41.00	96.50	062	< .120	Don mc	8-17
54835	172	173	172	41.00	90.00	062	< .120	Don mc	8-17

Skid Tag#	Edge	Crown	Edge	Width	Length	Square	Flatness	Inspected By	Date
54841	172	173	172	41.00	90.031	.12	< .120	Don mc	8-17
Last piece of last bundle	172	173	172	41.00	90.031	-.12	< .120	Don mc	8-17

AGT400 Coil Summary Report

Jemison Metals -- 75 Inch Red Bud CTL Line

Work Order: 57030 Coil Number: DU67255

Customer Name: THE SHEET Heat Number: DUFNLK1560071 Vendor: DUFERCO

Product: H.R.P.O. Steel Aug-17-15 9:01 AM to 10:49 AM (clock 108.0 min/ run 27.2 min) Shift: 1

Average Thickness and Tolerance Data

Target 0.1793 in Average* 0.1720 in Average - Target -0.0073 in (-4.09%)
Standard Deviation* 0.0020 in (1.13%)

Length 1654 ft Above High Limit 0.1873 in 0.00 (0.0%)
Width 41.000 in In Tolerance 1363 ft (82.4%)
Weight 39747 lbs Below Low Limit 0.1713 in 292 ft (17.6%)

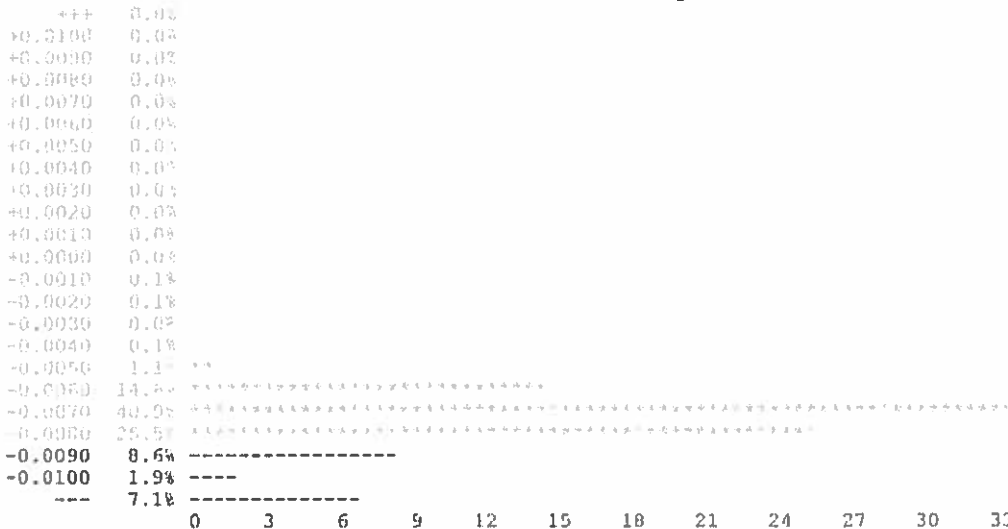
Max Thickness 0.1803 in at 48 ft Min Thickness 0.1612 in at 1042 ft
Head Scrap 15 ft Tail Scrap 4 ft

Statistical Process Control Data

Upper Control Limit 0.1781 in Upper Tolerance Limit 0.1873 in
X Double Bar 0.1720 in R Bar 0.0061 in
Lower Control Limit 0.1659 in Lower Tolerance Limit 0.1713 in

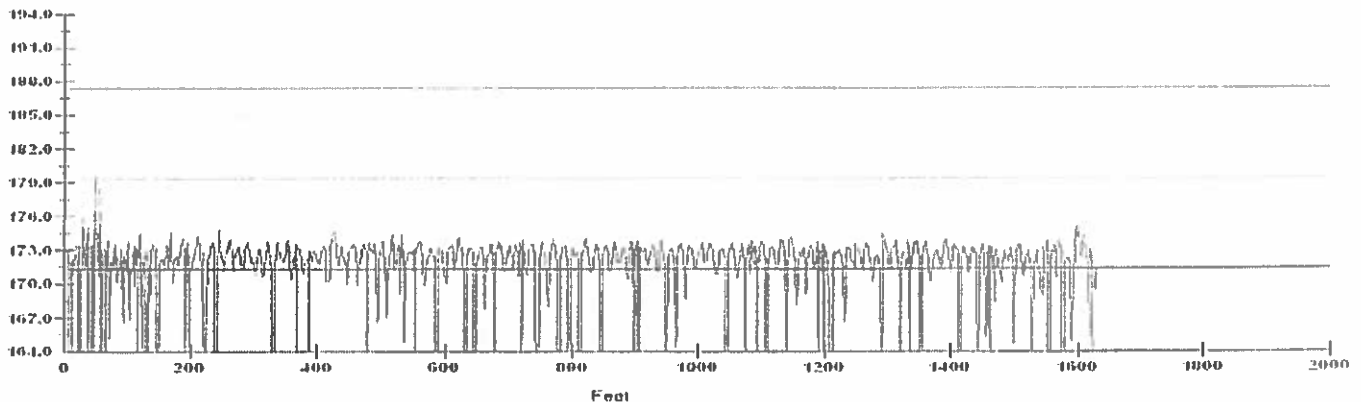
CR 76.1% (Capability Ratio %, 100/CP)
CP 1.314 (Process Capability, HiLim-LoLim/6*Sigma)
CPK 0.110 (Capability vs Limits) TMW Ratio 0.996 (Low Limit/Avg)

Thickness Distribution Relative to the Target



0.2% is within ± 0.0020 in of the target 1.4% is within ± 0.0050 in of the target
92.9% is within ± 0.0100 in of the target 100.0% is within ± 0.0200 in of the target

Thickness vs Length (Coil Number DU67255)



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