

Subject: Cleveland Process Audit

Date: September 14, 2015

Completed By: Steve Busicnki

On September 14, 2015, work order CLV 57405 was ran on the CR2 for Tool & Die. Tag DU67063 was verified prior to loading and use of the coil. One of the first pieces was measured for length, width, square, flatness and a micrometer was used to measure the materials gauge. The last piece of the third, fifth, and seventh bundles were measured for length, width, square, flatness and the gauger was monitored for material thickness. Based on the gauge report, 95.9% of the material was within specification with an average thickness of 0.0561. This average is within the customers specification of 0.0548 – 0.0648.

Part Spec/PO Audit Form

Cust #	9060	Customer	Tool & Die		Grp/Sz/Grd/Width	CRS / 0.0598 / CSB / 36.0000
Equip/Plant	PWC CR2	Work Order #	CLV 57405	Date	9/14/2015	
Work Order Information		Material to be Used		Actual		
		Tag #1	DUG7063	Tag #2	Gauge #1	Gauge #2
		PO#	21895-001	PO#	% Gauge In Spec	% Gauge In Spec
Gauge Range	0.0548 - 0.0648	Gauge Min	.0540 Min	Gauge Min	Low/High Gauge	Low/High Gauge
Width Range	36.0000 - 36.1875	Width	36.0000"	Width	Average	Average
Length Range	84.0000 - 84.1250				Width	Width
Rockwell		Rockwell		Rockwell	Length	Length
Tensile					Rockwell	Rockwell
Yield		A1008 Cold				
% Elongation		Rolled Coil				
Chem Rqmts		CS-Type B				
Other Rqmts		1 pcs 33,030lbs.				
Wave	0.00 - .12				Other	
Bow	0.00 - .12					
Flatn	0.00 - .12					
Summary						
Actions						
Final Status						

Quality Checklist

Date: 9-14-15

Customer: T&B

Work Order # 57405

Machine # 2

Master Tag # 10467063

Tag Weight: 33.030

Type: CEE

Ordered RB: M4

Gauge Tolerance				Width Tol:	Length Tol:	Square Tol:	Flatness Tol:		
-0.001				+0.001 +0.001	+0.001 +0.001	NA	0.12		
Skid Tag#	Edge	Crown	Edge	Width	Length	Square	Flatness	Inspected By	Date
59826	056	057	056	36.125	84.062	031	<0.120	Jm MC	9-14
Last piece of 1st bundle	0555	056	0555	36.125	84.062	031	<0.120	Jm MC	9-14

Skid Tag#	Edge	Crown	Edge	Width	Length	Square	Flatness	Inspected By	Date
59826	056	056	056	36.125	84.062	031	<0.120	Jm TA	9-14
59830	056	056	056	36.125	84.062	031	<0.120	Jm TA	9-14
59833	056	056	056	36.125	84.062	031	<0.120	Jm TA	9-14

Skid Tag#	Edge	Crown	Edge	Width	Length	Square	Flatness	Inspected By	Date
59835	056	056	056	36.125	84.062	031	<0.120	Jm TA	9-14
Last piece of last bundle	056	056	056	36.125	84.062	031	<0.120	Jm TA	9-14

AGT400 Coil Summary Report

Jemison Metals -- 75 Inch Red Bud CTL Line

Work Order: 57405 Coil Number: DU67063

Customer Name: TOOL DIE Heat Number: DUFNLK1557326 Vendor: DUFERCO

Product: Cold-Rolled Steel Sep-14-15 1:20 PM to 2:32 PM (clock 71.5 min/ run 34.6 min) Shift: 1

Average Thickness and Tolerance Data

Target 0.0601 in Average* 0.0561 in Average - Target -0.0040 in (-6.69%)
Standard Deviation* 0.0005 in (0.90%)

Length 4732 ft Above High Limit 0.0651 in 0 ft (0.0%)
Width 36.125 in In Tolerance 4538 ft (95.9%)
Weight 32670 lbs Below Low Limit 0.0551 in 198 ft (4.1%)

Max Thickness 0.0576 in at 4441 ft Min Thickness 0.0536 in at 1088 ft
Head Scrap 21 ft Tail Scrap 10 ft

Statistical Process Control Data

Upper Control Limit 0.0577 in Upper Tolerance Limit 0.0651 in
X Double Bar 0.0561 in R Bar 0.0016 in
Lower Control Limit 0.0545 in Lower Tolerance Limit 0.0551 in

CR 32.4% (Capability Ratio %, 100/CP)

CP 3.086 (Process Capability, HiLim-LoLim/6*Sigma)

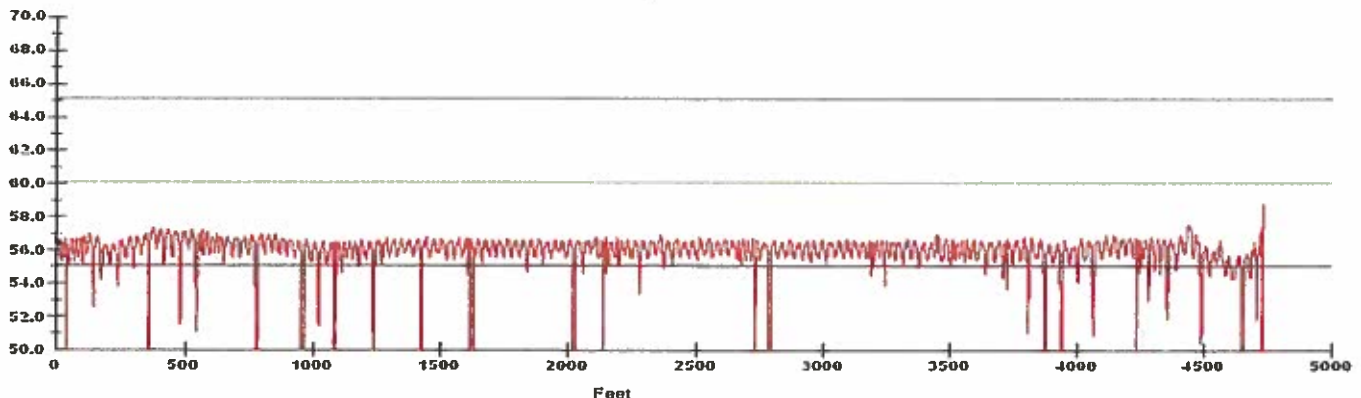
CPK 0.605 (Capability vs Limits) TMW Ratio 0.983 (Low Limit/Avg)

Thickness Distribution Relative to the Target

+++	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	0.0%
+0.0030	0.0%
+0.0020	0.0%
+0.0010	0.0%
+0.0000	0.0%
-0.0010	0.0%
-0.0020	0.0%
-0.0030	1.6% ***
-0.0040	55.9% *****
-0.0050	38.5% *****
-0.0060	3.6% -----
-0.0070	0.5% -
-0.0080	0.0%
-0.0090	0.0%
-0.0100	0.0%
---	0.0%

0.0% is within ± 0.0020 in of the target 95.9% 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 DU67063)



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