

**PHILLIPS SOUTHERN ELECTRIC CO., INC.**  
**1822 SOUTH MEAD**  
**WICHITA, KANSAS 67211**  
**316-265-4186, 316-265-1942 FAX**

TRANSMITTAL

**TO: Cornejo & Sons Construction**  
**2060 E Tulsa**  
**Wichita, Kansas 67216**

**No.: 5**  
**Date: March 26, 2009**  
**Attn: Bill Wenger**

**Regarding: Mid-American mast arm and pole/ Anchor bolt certifications**

**Job #: 08 200 Central & Tyler**

We are sending you herewith:

**Attached**     Shop drawings     Prints     Plans     Samples     Copy of Letter  
 Specifications     Change Order     **Certifications**     Product Data

Copies	Date	No.	Description
3	3/25/09		mast arm and pole/ anchor bolt certs

These are transmitted as checked below:

<input type="checkbox"/> For approval	<input type="checkbox"/> Approved as Submitted	<input type="checkbox"/> Resubmit # ___ copies for approval
<input checked="" type="checkbox"/> <b>For your use</b>	<input type="checkbox"/> Approved as noted	<input type="checkbox"/> Submit # ___ copies for distribution
<input type="checkbox"/> As requested	<input type="checkbox"/> Returned for corrections	<input type="checkbox"/> Return # ___ corrected prints
<input type="checkbox"/> For review and document		
<input type="checkbox"/> For bids due	2006	

Remarks:

Copy to:

Signed



Patrick Shane Phillips

472-87659



# CERTIFICATE OF COMPLIANCE

Date December 16, 2008	Project No. CENTRAL & TYLER, WICHITA, KS	Order No. 9902	Customer's Order No. 08-521-1
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**CUSTOMER: MID AMERICAN SIGNAL INC.**

WE CERTIFY THAT THE MATERIALS USED ON THIS PROJECT ARE IN COMPLIANCE WITH THE REQUIREMENTS ON THIS ORDER.

THE MATERIAL USED ON THIS PROJECT WAS PRODUCED IN THE UNITED STATES AND THE ATTACHED CERTIFICATIONS REPRESENT THE MATERIAL USED ON THIS PROJECT.

MATERIAL CERTIFICATIONS:

MATERIAL	SPECIFICATIONS	HEAT NUMBER	GRADE	CYCLE
3 GA TUBE	A595	4188548	A	279
7 GA TUBE	A595	4189358	A	279
3/4" SCH 40	A500	E81353		
1/2" SCH 80	A500	TCP5B46399		
1/4" GUSSET	A36	4157582		
3/8" CLAMP PLATE	A36	8107869		
2" POLE PLATE CHARPY	A36	T1668		
3/4" X 3/4" X 1/8" CLIP	A36	N540863		
1/4" X 1" SUPPORT BAR	A36	E4974		
1/2" X 2-1/2" STL HH FRAME	A529	JG3269		
5/8" STUD - 5/8" ROUND BAR	A36	E2916		
601668 1-1/4" WASHER	F-436	2141028		
502127 2" WASHER	F-436	2131928		
601418 5/8" NUT	A563	S01412		
502523 1-1/4" NUT	A563	M25706		

This Certificate Notarized Only When Required

**JENNIFER WAGNER**

A Notary Public, do hereby certify that this affidavit was subscribed and sworn to before me by a duly authorized agent of the Union Metal Corporation.

This is to certify that the foregoing data is a true copy of the data furnished to us by the producing mill and from data resulting from tests performed at Union Metal Corporation.

16<sup>th</sup> day of December, 2008

By

October 17, 2010

My commission expires

Notary Public





# PRODUCT CERTIFICATION

WORK ORDER LOT NUMBER  
**FC2870 4188548**  
 SALES ORDER / RLS  
**411211 / 1**

ArcelorMittal Cleveland Inc.



SOLD TO 000786-000

**UNION METAL**  
 1935 16TH ST N.E. & HARRISBURG ROAD N.E.  
 CANTON, OH 44705  
 USA  
 Attn: Renee Grossman

CUSTOMER P.O. <b>18594-11</b>	CUSTOMER PART <b>3GA62-1/2-UMS28/R0</b>	QUANTITY <b>41,920 LBS</b>	COILS <b>1</b>	LADING NO <b>01268789</b>	SHIPMENT DATE <b>10/08/2008</b>					
SPECIFICATION 0.2470 Min -0.0000/ +0.0260 X 63.0000 + 1.5000 ME(IN) ID 24.0/30.0 OD 60.7/80.0 (IN) CL WT 40000/50000 (LBS) Hot Band Prime Carbon Structural Steel UMS 28 Change Stock- Brandle UEXP										
CERTIFICATION REQUIREMENTS <b>UNION METAL SPEC UM-S28 DTD 10/5/94 SAE-1021 CS STRUCTURAL STEEL</b>										
<b>Chemical</b>										
<b>C</b>	<b>Mn</b>	<b>P</b>	<b>S</b>	<b>Si</b>	<b>Cu</b>	<b>Ni</b>	<b>Cr</b>	<b>Mo</b>	<b>Sn</b>	<b>Al</b>
0.2000	0.8000	0.0150	0.0060	0.0200	0.0400	0.0100	0.0300	0.0100	0.0070	0.0520
<b>V</b>	<b>Cb</b>	<b>N</b>	<b>B</b>	<b>Ti</b>	<b>Sb</b>	<b>Ca</b>				
0.0020	0.0000	0.0042	0.0000	0.0020	0.0020	0.0001				
<b>Origin - Made and Melted in USA</b>										
<b>Tag Numbers</b>										
695849										

I certify that the material listed herein has been inspected and tested in accordance with the methods prescribed in the governing specifications and based upon the results of such inspection and testing had been approved for conformance to the specifications.

**Matthew Kremer**  
 QA Manager



QF-308, TEST.A-595,  
Rev.2, Certified Test Reports.  
grossman.5/16/06

MATERIALS MELTED AND MANUFACTURED IN THE USA

CERTIFIED TEST REPORT

ITEM NO	DIMENSIONS	HEAT NUMBER	ASTM SPEC. NUMBER	DATE	CYCLE NO.	CUSTOMER ORDER NO.
				12-2-08	279	
				GRADE	PURCHASE ORDER	MANUFACTURER
1	11 GAGE		A595	A		
2	7 GAGE	4189358			18594	ARCELORMITTAL
3	3 GAGE	4188548			18594	ARCELORMITTAL
4	0 GAGE	4157113			15812	ARCELORMITTAL

ITEM NO	MECHANICAL TESTS						TEST NO
	YIELD STRENGTH PSI	ULTIMATE STRENGTH PSI	% ELONG. IN 2"	BEND TEST	% RED AREA		
1							
2	61828	71195	32.3			10595	
3	55689	65938	33.0			10593	
4	55195	67665	33.5			10592	

ITEM NO	CHEMICAL ANALYSIS											
	C	Mn	P	S	SI	Cu	Al	NI	Cr	Mo	V	N
1												
2	.22	.75	.009	.007	.02	.04	.063	.02	.03	.01	.001	.0032
3	.20	.80	.015	.006	.02	.04	.052	.01	.03	.01	.002	.0042
4	.20	.73	.008	.008	.01	.04	.063	.02	.03	.01	.000	.0025

This Certificate Notarized Only When Required

I, JENNIFER WAGNER a Notary Public do hereby certify that this affidavit was subscribed and sworn to before me by a duly authorized signatory of the Union Metal Corporation.

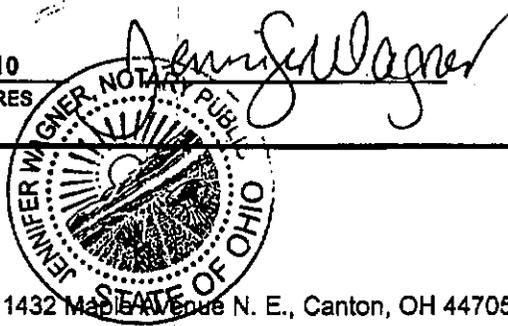
This is to certify that the foregoing data is a true copy of the data furnished to us by the producing mill and from data resulting from tests performed at Union Metal Corporation.

this 15TH day of DECEMBER, 2008

UNION METAL CORPORATION

October 17, 2010

MY COMMISSION EXPIRES



BY

# PRODUCT CERTIFICATION

WORK ORDER LOT NUMBER  
**FC2840 4189358**  
 SALES ORDER / RLS  
**411162 / 1**

ArcelorMittal Cleveland Inc.



SOLD TO 000786-000

**UNION METAL**  
 1935 16TH ST N.E. & HARRISBURG ROAD N.E.  
 CANTON, OH 44705  
 USA  
 Attn: Renee Grossman

CUSTOMER P.O. <b>18594/13</b>	CUSTOMER PART <b>7GA36-UMS28/R0</b>	QUANTITY <b>35,890 LBS</b>	COILS <b>1</b>	LADING NO <b>01271956</b>	SHIPMENT DATE <b>10/16/2008</b>					
SPECIFICATION 0.1770 Min -0.0000/ +0.0140 X 36.5000 + 1.1250 ME(IN) ID 24.0/30.0 OD 66.2/80.0 (IN) CL WT 29200/36500 (LBS) Hot Band Prime Carbon Structural Steel UMS 28 Change Stock- Brandle UEXP										
CERTIFICATION REQUIREMENTS <b>Union Metal Spec UM-S28 DTD 10/5/94 SAE 1021 Mod Structural Steel</b>										
<b>Chemical</b>										
C	Mn	P	S	Si	Cu	Ni	Cr	Mo	Sn	Al
0.2200	0.7500	0.0090	0.0070	0.0200	0.0400	0.0200	0.0300	0.0100	0.0050	0.0630
V	Cb	N	B	Ti	Sb	Ca				
0.0010	0.0000	0.0032	0.0000	0.0020	0.0020	0.0002				
<b>Origin - Made and Melted in USA</b>										
<b>Tag Numbers</b>										
697334										

I certify that the material listed herein has been inspected and tested in accordance with the methods prescribed in the governing specifications and based upon the results of such inspection and testing had been approved for conformance to the specifications.

**Matthew Kremer**  
 QA Manager



# Tubular Steel Inc

Since 1963  
"Performance you can count on"

Tubular Steel Inc  
1031 Executive Parkway Drive  
Saint Louis, MO 63141  
Phone: (314) 851-9200  
Fax: (314) 851-9336

Customer PO: 19247  
Union Metal  
P O Box 9920  
Canton, OH 44711

TSI Sales ID: SO-048508  
Date: 10-30-08

Fax: 330-456-1720  
MTR Recipient: Jim Burand

Page 1

### Cover sheet/Certificate of compliance

- \*\* The material listed below was purchased to the stated specification, when marked
- \*\* Documents for the material listed below are attached

Size	Item / Customer Part No.	Certification
1.050x0.109	RND CARB WELD AR SO075SCH40-A501	ASTM A500 B AND/OR C

Heat number	Apology status
E81353	

Size	Item / Customer Part No.	Certification
4.500x0.237	RND CARB WELD AR SO400SCH40-A501	ASTM A500 B AND/OR C

Heat number	Apology status
627433	
627597	
615874	
615871	

Size	Item / Customer Part No.	Certification
5.563x0.258	RND CARB WELD AR SO500SCH40-X52	ASTM A500 B AND/OR C

Heat number	Apology status
A17601	

\*\* Material referenced on the test report is certified by the manufacturer to meet the specification indicated under the testing procedures established, including any allowable variance

\*\* Mechanical and chemical properties reported on mill test reports are sample results only and do not represent minimum, maximum, or average values

\*\* Data reported on attached documents has been computer verified to meet the requirements of the specification

**BULL MOOSE TUBE COMPANY**

**BULL MOOSE TUBE GERALD FACILITY  
CERTIFICATION OF TESTS**

05/28/08  
Page 2 of 3

1818 Clarkson Rd.  
Cheverfield, Missouri 63017

**BILL TO** Tubular Steel, Inc.  
Attn: Accounts Payable  
1031 Executive Parkway Drive  
St. Louis MO 63141-6361

**SHIP TO** Tubular Steel, Inc.  
1700 Tubular Steel Road  
Staunton

IL 62088-1076

B/L Number 108809

Ship Via

35\_F35

1.05" X 0.109 HR X 21' 6"										Order #		247728	
26.7 mm										Purchase Order #		2349	
ASTM A500-03 Grade B Melted & Manufactured in the USA										Item #		135735 0672	
Ticket # = 13047676										P			
Heat # = E81353										VA		YLD psi TSN psi ELN #	
C	MN	P	S	AL	SI	CB	CU	CR	NI	VA	YLD psi	TSN psi	ELN #
.170	.400	.007	.008	.037	.012	0.000	0.000	0.000	0.000	0.000	70169	74915	37
1.05" X 0.109 HR X 21' 6"										Order #		247728	
26.7 mm										Purchase Order #		2349	
ASTM A500-03 Grade B										Item #		135735 0672	
Ticket # = 13047672										P			
Heat # = E81386										VA		YLD psi TSN psi ELN #	
C	MN	P	S	AL	SI	CB	CU	CR	NI	VA	YLD psi	TSN psi	ELN #
.160	.410	.015	.001	.032	.027	0.000	0.000	0.000	0.000	0.000	71428	77408	30
1.05" X 0.109 HR X 21' 6"										Order #		247728	
26.7 mm										Purchase Order #		2349	
ASTM A500-03 Grade B										Item #		135735 0672	
Ticket # = 13047670										P			
Heat # = C45801										VA		YLD psi TSN psi ELN #	
C	MN	P	S	AL	SI	CB	CU	CR	NI	VA	YLD psi	TSN psi	ELN #
.050	.390	.020	.008	.028	.020	0.000	0.000	0.000	0.000	0.000	66722	68243	31
1.05" X 0.109 HR X 21' 6"										Order #		247728	
26.7 mm										Purchase Order #		2349	
ASTM A500-03 Grade B										Item #		135735 0672	
Ticket # = 13047671										P			
Heat # = E81398										VA		YLD psi TSN psi ELN #	
C	MN	P	S	AL	SI	CB	CU	CR	NI	VA	YLD psi	TSN psi	ELN #
.190	.510	.013	.010	.030	.010	0.000	0.000	0.000	0.000	0.000	72968	78859	28

Shipping Clerk:

*[Signature]*

THIS WELDED STEEL TUBING IS MANUFACTURED IN THE UNITED STATES OF AMERICA AND HAS BEEN PRODUCED IN ACCORDANCE WITH THE STATED SPECIFICATION. LADLE CHEMISTRIES ARE REPORTED FROM DOCUMENTS PROVIDED BY THE SUPPLYING STEEL MILL. ANY PHYSICAL AND MECHANICAL TESTING RESULTS SHOWN ON THIS CERTIFICATION ARE CORRECT AS CONTAINED IN THE RECORDS OF THE COMPANY.



# Tubular Steel Inc

Since 1963  
"Performance you can count on"

Tubular Steel Inc  
1031 Executive Parkway Drive  
Saint Louis, MO 63141  
Phone: (314) 851-9200  
Fax: (314) 851-9336

Customer PO: 19623  
Union Metal  
P O Box 9920  
Canton, OH 44711

Fax: 330-456-1720  
MTR Recipient: Jim Burand

TSI Sales ID: SO-052407  
Date: 11-20-08

Page 1

### Cover sheet/Certificate of compliance

- \*\* The material listed below was purchased to the stated specification, when marked
- \*\* Documents for the material listed below are attached

Size	Item / Customer Part No.	Certification
0.840x0.147	RND CARB WELD AR S0050SCH80-A501	
	Heat number TCP5B46399	Apology status
1.660x0.140	RND CARB WELD AR S0125SCH40-A501	ASTM A500 B AND/OR C
	Heat number U61810	Apology status
2.375x0.218	RND CARB WELD AR S0200SCH80-A501	ASTM A500 B AND/OR C
	Heat number 1802245	Apology status
1.750x0.188	RND CARB WELD CD D188X0175-A513	

\*\* Material referenced on the test report is certified by the manufacturer to meet the specification indicated under the testing procedures established, including any allowable variance

\*\* Mechanical and chemical properties reported on mill test reports are sample results only and do not represent minimum, maximum, or average values

\*\* Data reported on attached documents has been computer verified to meet the requirements of the specification



**Sharon Tube Company**

166 Mill Street  
 PO Box 408  
 Sharon, PA 16140  
 (800) 549-4119  
 (724) 961-1931 (RIN)

**PRODUCT CERTIFICATION**

HEAT NUMBER  
**top5b46399**  
 SALES ORDER  
**151888**

SOLD TO

SHIP TO

TUBULAR STEEL  
 1700 TUBULAR  
 STAUNTON, IL 62088  
 USA  
 Attn: Receiving

TUBULAR STEEL  
 1700 TUBULAR  
 STAUNTON, IL 62088  
 USA  
 Attn: Receiving

CUSTOMER P.O. 3413	CUSTOMER PART	QUANTITY 192 Pos	BNDLS LADING NO 2 00002616	SHIPMENT DATE 03/27/2006						
SPECIFICATION CSP0840Xh80F021 1/2", XH, 801, PE, 21', 0.0", ASTM A53-Type F Grade A										
CERTIFICATION REQUIREMENTS										
<b>Chemical, Leds Analysis, %</b>										
C	Mn	P	S	Si	Al	Cu	Ni	Cr	Mo	V
.12	.44	.020	.016	.016	.049	.013	.020	.022	.006	.001
Sn	SVM	CE								
.001	.055	.200								
<b>Pipe Mechanical Test Results</b>										
	Yield, PSI	Tensile, PSI	Elong, 4-2"	Y/T Ratio	Hard, HRB	Hydro, PSI	Bend	Flatten		
B00120/004	34480	54180	49	.636		850	Pass	Pass		
B00120/005	34480	54180	49	.636		850	Pass	Pass		
<p>Certified Test Report Type 3.1B in accordance with EN 10201/ISO 10474/DIN 30048. Material has not come in direct contact with mercury, any of its compounds or any mercury bearing devices during the manufactured process, tests or inspections. Material does not contain any polybrominated biphenyls (PBB) or polybrominated diphenyl ethers (PBDE).</p> <p>Welded Steel Pipe Meeting the Requirements of ASTM A53-05 Type F Grade A/ASME SA-53 Type F 2001 Edition, A03 Revision or ASTM A53-05 Type E Grade B/ASME SA-53 Type E Grade B 2001 Edition, A03 Revision. Each length of pipe Hydrostatically Tested. No weld repairs have been performed. Yield strength determined @ 0.2% offset. All bend or flatten tests passed. Manufactured in the U.S.A.</p> <p style="text-align: center;"><i>End of Certification</i></p>										

Steven M. Grabert, Manager, Technical Services, being duly sworn according to law, deposes and says that the figures set forth above are correct, as contained in the figures of Sharon Tube Company.



QF-308, TEST.A-595,  
Rev.1, Certified Test Reports. 5yrs.  
Sbayala.5/16/01, SbA.UMC.QA

MATERIALS MELTED AND MANUFACTURED IN THE USA

<b>1/4" PLATE</b> <b>MEETS OR EXCEEDS ASTM A36</b> <b>TESTED TO ASTM A6</b>	<b>CERTIFIED TEST REPORT</b>						
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:15%; padding: 2px;">DATE</td> <td style="width:25%; padding: 2px;">CYCLE NO.</td> <td style="width:60%; padding: 2px;">CUSTOMER ORDER NO.</td> </tr> <tr> <td style="padding: 2px;">10-13-08</td> <td style="padding: 2px;"></td> <td style="padding: 2px;"></td> </tr> </table>	DATE	CYCLE NO.	CUSTOMER ORDER NO.	10-13-08			
DATE	CYCLE NO.	CUSTOMER ORDER NO.					
10-13-08							

ITEM NO	DIMENSIONS	HEAT NUMBER	ASTM SPEC.		PURCHASE ORDER	MANUFACTURER
			NUMBER	GRADE		
1	3 GAGE	4157582	A36	A	16265	ARCELORMITTAL

MECHANICAL TESTS							
SMPL NO	YIELD STRENGTH	ULTIMATE STRENGTH	% ELONG.		BEND TEST	%RED AREA	TEST NO
	PSI	PSI	IN 2"	IN 8"			
1	47332	67572	31.0				N/A
2	46563	66084	32.0				N/A

ITEM NO	CHEMICAL ANALYSIS											
	C	Mn	P	S	SI	Cu	Al	NI	Cr	Mo	V	N
1	.22	.70	.006	.007	.02	.05	.062	.02	.03	.01	.000	.0035

This Certificate Notarized Only When Required

I, RENE L. GROSSMAN a Notary Public do hereby certify that this affidavit was subscribed and sworn to before me by a duly authorized signatory of the Union Metal Corporation.

This is to certify that the foregoing data is a true copy of the data furnished to us by the producing mill and from data resulting from tests performed at Union Metal Corporation.

this 13TH day of OCTOBER, 2008

UNION METAL CORPORATION

January 31, 2010  
MY COMMISSION EXPIRES



BY: [Signature]

# PRODUCT CERTIFICATION

WORK ORDER LOT NUMBER

**FB7019 4157582**

ArcelorMittal Cleveland Inc.



**ArcelorMittal**

SALES ORDER / RLS

**389908 / 1**

SOLD TO 000786-000

**UNION METAL**

**1935 16TH ST N.E. & HARRISBURG ROAD N.E.**

**CANTON, OH 44705**

**USA**

**Attn: Renee Grossman**

CUSTOMER P.O. <b>16265-18</b>	CUSTOMER PART <b>3GA55-1/2-UMS28/R0</b>	QUANTITY <b>48,990 LBS</b>	COILS <b>1</b>	LADING NO <b>01200751</b>	SHIPMENT DATE <b>06/18/2008</b>					
SPECIFICATION 0.2470 Min -0.0000/ +0.0240 X 56.0000 + 1.5000 ME(IN) ID 30.0/30.0 OD 63.5/69.3 (IN) CL WT 40000/50000 (LBS) Hot Band Prime Carbon Structural Steel UMS 28 Change Stock- Brandle UEXP										
CERTIFICATION REQUIREMENTS <b>Union Metal Spec UM-S28 DTD 10/5/94 SAE 1021 Mod Structural Steel</b>										
<b>Chemical</b>										
C	Mn	P	S	Si	Cu	Ni	Cr	Mo	Sn	Al
0.2200	0.7000	0.0060	0.0070	0.0200	0.0500	0.0200	0.0300	0.0100	0.0110	0.0620
V	Cb	N	B	Ti	Sb	Ca				
0.0000	0.0000	0.0035	0.0001	0.0010	0.0030	0.0003				
<b>Origin - Made and Melted in USA</b>										
<b>Tag Numbers</b>										
657771										

I certify that the material listed herein has been inspected and tested in accordance with the methods prescribed in the governing specifications and based upon the results of such inspection and testing had been approved for conformance to the specifications.

**Matthew Kremer**  
QA Manager

**NUCOR**  
PLATE MILL

P.O. Box 279  
Winton, NC 27986  
(252) 356-3700

**Mill Test Report**

Page 1



*W. Coors.*  
*AL 67804*

Issuing Date : 10/16/2008  
Vehicle No : 7334  
Specification : 0.3750" x 96.000" x 120.000"  
ASTM A36-08/ASTM A709 Grade 36-07/ASME SA36-03a

Load No. : 217370  
Sold To : KENILWORTH STEEL  
106 EAST MARKET STREET  
WARREN, OH 44481

Our Order No. : 66582/1  
Ship To : Kenilworth Steel  
621 Dana  
WARREN, OH 44483

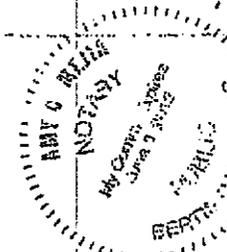
Cust. Order No. : 10-34891-UJM

Marking :

Heat No	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	AlZ	V	Nb	Ti	N	Ca	B	Sn	CEQ	PCM
8107869	0.17	0.82	0.016	0.003	0.11	0.27	0.07	0.10	0.02	0.007	0.005	0.003	0.002	0.008	0.0008	0.0001	0.011	0.35	0.24

Plate Serial No	Tensile Test			Charpy Impacts			Mln Temp (°F) Ave.							
	Pieces	Tons	Dir.	(psi) Yield	(psi) Tensile	Elongation % in 2"		(ft-lbs) 2 shear	(ft-lbs) 3 shear	(ft-lbs) shear Ave.	(%) shear	Size		
8107869-08	15	9.18	T	45,800	71,000	25.8	H-L	76.9	63.0	60.6	66.8	10mm	40	15
8107869-09	22	13.47	T	43,600	68,200	24.6	H-L	76.9	63.0	60.6	66.8	10mm	40	15



*John C. ...*  
*10/17/08*

NFCM, T1 and T2, 15R-lbs @ 40 F (20J @ 44 C), H frequency :

Manufactured to fully killed practice by Electric Arc Furnace. Welding or weld repair was not performed on this material. We hereby certify that the contents of this report are accurate and correct. All test results and operations performed by the material manufacturer are in compliance with the applicable specifications, including customer specifications.

Mercury has not been used in the direct manufacturing of this material. Produced as continuous cast discovate plate as-rolled, unless otherwise noted in Specification.

Yield by 0.5EUL method unless otherwise specified. Ceq = C+(Mn/6)+(Cr+Mo+V)/5+(Cu+Ni)/15

Pcm = Cr+(Si/30)+(Mn/20)+(Cu/20)+(Ni/60)+(Cr/20)+(Mo/15)+(V/10)+88

Meltd and manufactured in the USA, ISO 9001-2000 certified (#12443-0) by SRI Quality System Registrar (#0965-09), PED 97/23/REC 712 Annex 1, Para. 4.3 Compliant.

DIN 50049 3.1.B/EN 10204 3.1B(2004), DIN EN 10204 3.1(2005) compliant. For ABS grades only, Quality Assurance certificate 05-MMPOA-363

*T.A. Depretis*

T. A. Depretis, Metallurgist

10/16/2008 2:31:15 PM

TEST CERTIFICATE

SHIP TO: ARCELORMITTAL PLATE LLC  
KENILWORTH STEEL CO  
621 DANA ST NE  
WARREN OH 44483

PAGE NO: 01 OF 02  
FILE NO: 4269-01-12  
MILL ORDER NO: 20004-005  
MELT NO: T1668  
DATE: 09/12/08

SOLD TO: KENILWORTH STEEL COMPANY  
106 EAST MARKET STREET  
SUITE 809  
WARREN OH 44481

SEND TO:

01-N

PLATE DIMENSIONS / DESCRIPTION

TOTAL QTY	GAUGE	WIDTH	LENGTH	DESCRIPTION	PIECE WEIGHT
3	2"	96"	240"	RECTANGLE	13068#

CUSTOMER INFORMATION

CUSTOMER PO: 09-34848

SPECIFICATION (S)

THIS MATERIAL HAS BEEN MANUFACTURED AND TESTED IN ACCORDANCE WITH PURCHASE ORDER REQUIREMENTS AND SPECIFICATION(S).

ASTM A709-GR36 YR 07  
IMPACTS WAIVED ASME SA36 ED 07 & ASTM A36 05  
MATERIAL PRODUCED UNDER A CERTIFIED QUALITY MGMT SYSTEM COMPLYING WITH ISO 9001 ABS-QE CERT. NO. 30130

CHEMICAL COMPOSITION

MELT	C	MN	P	S	CU	SI	NI	CR	MO
MELT:T1668	.18	1.03	.025	.014	.12	.20	.07	.08	.01
MELT:T1668		V	AL	CB					
		.004	.027	.001					

TENSILE PROPERTIES

LOC	DIR	YIELD STRENGTH PSI X 100	TENSILE STRENGTH PSI X 100	ELONGATION GAGE LGTH	%
BOT.	TRANS.	363	679	2.00"	32.0
BOT.	TRANS.	430	688	2.00"	28.0

GENERAL INFORMATION

ALL STEEL HAS BEEN MELTED AND MANUFACTURED IN THE U.S.A.  
MERCURY OR MERCURY COMPOUNDS ARE NOT USED IN THE  
MANUFACTURE OF ARCELORMITTAL PLATE LLC PRODUCTS.

APPROVED AND SUBSCRIBED BEFORE ME  
THIS 12th DAY OF 09/2008

NOTARY PUBLIC

WE HEREBY CERTIFY THE ABOVE  
INFORMATION IS CORRECT:

QUALITY ASSURANCE LABORATORY  
COATESVILLE, PA 19320

NOTARIAL SEAL  
CAROL L. SLODY, NOTARY PUBLIC  
COATESVILLE, CHESTER CO., PA  
MY COMMISSION EXPIRES MAY 27, 2010

Elinore Zaplitny  
SUPERVISOR - TEST REPORTING  
ELINORE ZAPLITNY

A4439E

A3465-3467E

UNUSUAL  
DISCREPANCY  
B/L 6789D

NO. 1000

JAB337-301

KENILWORTH STEEL  
Attn: GREG REGALIA  
Phn: 800-537-5283  
Fax: 330-399-2144

12-35108

UNION METAL  
CORP 1605  
BLK 67810

CHARPY WORKSHEET

Tensile Testing  
Metallurgical Laboratory  
Phn: 215.641.3290  
Fax: 215.641.3291

Size	Temp	Pt. lbs	Int Exp	Shear	P/F
7/AA390E 01	Full +40 F	68			PASS
	AVG	93			
		25			
		62			
8/AA387E 01	Full +40 F	57			PASS
		48			
		15			
		40			
8/AA439E 01	Full +40 F	44			PASS
		76			
		52			
		57			
4/AA365E 01	Full +40 F	40			PASS
		72			
		75			
		62			
5/AA463E 01	Full +40 F	72			PASS
		54			
		53			
		60			

The above results are preliminary for information purposes only. Certificate Reports will be mailed.



196 Bell Avenue  
CARNEGIE, PA 15106

**CERTIFICATION OF MATERIAL**

**CUSTOMER:** UNION METAL CORP  
1432 MAPLE AVE NE  
CANTON, STARK  
OH 44705-1720

**SALES ORDER NUMBER:** 10779717 000010  
**CUSTOMER PURCHASE ORDER:** 13707  
**CUSTOMER PART NUMBER:**  
**DELIVERY NUMBER:** 81145248 000010

**MATERIAL NUMBER:** 160000004  
**INVENTORY DESCRIPTION:** ANG A36 .75 X .75 X .125 X 240

**FINISHED ITEM DESCRIPTION:** CARB ANG A36  
0.75" X 0.75" X 0.125" X 240"

**HEAT NUMBER(s)**                      **SLAB/COIL/TEST NUMBER (if applicable)**  
N540863

**CERTIFICATION**

A survey of our material sources has indicated that neither mercury nor radioactive substances is introduced into their products, or is used in any of their processes. While we make no independent tests for mercury or radiation, there is nothing in Ryerson's system which could be expected to introduce contamination of either type.

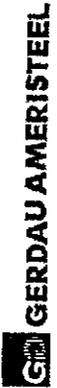
This document certifies that the material described above was shipped in accordance with your order. The producer of the material has certified to Ryerson that it was produced in accordance with the following spec:

ASTM A36      ASME SA36

Authorized Agent of Ryerson

11/09/2007

010104



CAMBRIDGE STEEL MILL  
160 ORION PLACE  
CAMBRIDGE ON N1T 1R9 CAN  
(519) 740-2488

005837

Chemical and Physical Test Report  
MADE IN CANADA

SHIP TO RYERSON TULL 5 CLINTON STREET 314-231-1020 ST LOUIS, MO 63102	INVOICE TO RYERSON TULL PROCUREMENT/CHIC P.O. BOX 8000 A CHICAGO, IL 60680	SHIP DATE 07/21/05	CUST. ACCOUNT NO 40000093
---	---	-----------------------	------------------------------

SHAPE & SIZE	GRADE	SPECIFICATION	SALES ORDER	CUST P.O. NUMBER
A3/4 X 3/4 X 1/8	A36	ASTM A36/A36M-04; CSA-G40.21-300W-98(44W)	5048032-01	3A6842

HEAT I.D.	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Nb	Sn
N540863	.12	.60	.008	.038	.17	.45	.11	.16	.096	.005	.003	.014

Mechanical Test: Yield 53613 PSI, 369.65 MPA Tensile: 73388 PSI, 505.99 MPA %EI: 24.0/8in, 24.0/200MM  
 THIS GRADE ALSO MEETS ASME SA36-01 SPECIFICATION  
 Mechanical Test: Yield 53333 PSI, 367.72 MPA Tensile: 74399 PSI, 512.96 MPA %EI: 24.5/8in, 24.5/200MM  
 THIS GRADE ALSO MEETS ASME SA36-01 SPECIFICATION  
 CUST ITEM NUMBER: J0104

SHAPE & SIZE	GRADE	SPECIFICATION	SALES ORDER	CUST P.O. NUMBER
G2 X 1 X 1/8	A36	ASTM A36/A36M-04; CSA-G40.21-300W-98(44W)	5023635-01	3A6310

HEAT I.D.	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Nb	Sn
N541524	.15	.88	.013	.040	.23	.31	.12	.14	.055	.005	.003	.012

Mechanical Test: Yield 53587 PSI, 369.47 MPA Tensile: 74973 PSI, 516.92 MPA %EI: 27.0/8in, 27.0/200MM  
 THIS GRADE ALSO MEETS ASME SA36-01 SPECIFICATION  
 Mechanical Test: Yield 53609 PSI, 369.62 MPA Tensile: 73176 PSI, 504.53 MPA %EI: 21.0/8in, 21.0/200MM  
 THIS GRADE ALSO MEETS ASME SA36-01 SPECIFICATION  
 CUST ITEM NUMBER: 010542

JOSEPH T. RYERSON & SONS INC  
RECEIVING DEPARTMENT

JUL 25 2005

SUBJECT TO INSPECTION

Customer Notes

A36: ASTM A36-00A & A709-00A ASME-SA36-97A  
This material, including the billets, was produced and manufactured in Canada.

A.J. Turner

Quality Assurance Manager  
Mill Group

THE ABOVE FIGURES ARE CERTIFIED EXTRACTS FROM THE ORIGINAL CHEMICAL AND PHYSICAL TEST RECORDS AS CONTAINED IN THE PERMANENT RECORDS OF COMPANY.

*Eric Hancock*

Mgr. Metallurg. Svcs.  
CAMBRIDGE STEEL MILL

**SOLD** YOUNGSTOWN PIPE & SUPPLY INC  
 4100 LAKE PARK RD  
 PO BOX 3467  
 YOUNGSTOWN, OH 44513-0000

**SHIP** YOUNGSTOWN PIPE  
 219 PHELPS ST  
 TO: YOUNGSTOWN, OH 44512-0000

**NUCOR**  
 BAR MILL GROUP  
 NUCOR STEEL AUBURN, INC.

Ship from:  
 Nucor Steel - Auburn  
 25 Quarry Road  
 Auburn, NY 13021  
 315-253-4581

**CERTIFIED MILL TEST REPORT**

Date: 25-Aug-2008  
 B.L. Number: 352509  
 Load Number: 102519

Material Safety Data Sheets are available at [www.nucorbar.com](http://www.nucorbar.com) or by contacting your inside sales representative.

HEAT NUM. *	DESCRIPTION	PHYSICAL TESTS			CHEMICAL TESTS																
		YIELD P.S.I.	TENSILE P.S.I.	ELONG % IN 8"	BEND	WT%	DEF	C	Nb	Mn	Cr	P	Mo	S	V	Si	Ch	Cu	Sn	C.E.	
PO# =>	83141																				
E4974	Nucor Steel - Auburn Inc	53,200	73,300	23.8%																	
E4974	1/4x1" FL 20" A36/44W	367MPa	505MPa	25.0%																	
	CSA G40.21-98 44W/ASTM A36/A36M- ASTM A709/A709M-07 GR 36 ASME SA36-2007 EDITION ASTM A36/A36M-05	54,600	73,600	25.0%																	
		376MPa	507MPa																		

COGNATE STEEL PRODUCTS & SUPPLY INC.  
 10000 W. STATE ST. #2100  
 CLEVELAND, OH 44115  
 THESE TEST REPORTS ARE PROPERTY OF COGNATE STEEL PRODUCTS & SUPPLY INC.  
 SOLD TO: [Signature]  
 YOUR P.O. # [Signature]  
 ISSUES OF 3/1/08  
 SIGNATURE BY: [Signature]

I HEREBY CERTIFY THAT THE ABOVE FIGURES ARE CORRECT AS CONTAINED IN THE RECORDS OF THE CORPORATION.

ALL MANUFACTURING PROCESSES OF THE STEEL MATERIALS IN THIS PRODUCT, INCLUDING MELTING HAVE OCCURRED WITHIN THE UNITED STATES. ALL PRODUCTS PRODUCED ARE WELD FREE.

QUALITY CONTROL  
 JIM BIERNAL



Steel Dynamics - Roanoke Bar Division  
 P.O. Box 13948 Roanoke, VA 24038  
 Office: 540-342-1831 Fax: 540-342-9437

Test and Inspection

YOUNGSTOWN PIPE & SUPPLY INC  
 PHONE# 330-783-2700  
 THESE TESTS REPORTS APPLY TO:  
 SOLD TO: UNION U.S.A.  
 YOUR P.O.# 1985  
 YS&S O.M.# 57383  
 ORDERED BY YP&S W.M.M.

NO. 57743-1  
 ROANOKE

YOUNGSTOWN PIPE & SUPPLY INC  
 4100 LAKE PARK RD.  
 YOUNGSTOWN OH 44513-0000

Date 2/26/08

HEAT NUMBER	SIZE	1-YIELD PT. KSI	ULTIMATE KSI	ELONG 8 IN. TEST	BEND TEST	GRADE				
JG3269	FLATS 1/2 X 2 1/2	54.8	85.4	25.0		A529-50				
PURCHASE ORDER NUMBER	NUMBER PIECES	2-YIELD PT. KSI	ULTIMATE KSI	ELONG 8 IN. TEST	BEND TEST	GRADE				
80640	144 PIECES 20'	52.6	80.7	26.3		A529-50				
HEAT NUMBER	SIZE	1-YIELD PT. MPA	ULTIMATE MPA	ELONG 203mm TEST	BEND TEST	GRADE				
JG3269	FLATS 12.7 X 63.5	377.8	588.8	25.0		A529-50				
PURCHASE ORDER NUMBER	NUMBER PIECES	2-YIELD PT. MPA	ULTIMATE MPA	ELONG 203mm TEST	BEND TEST	GRADE				
80640	144 PIECES 20'	362.7	556.4	26.3		A529-50				
C	MN	S	P	SI	CR	NI	MO	CU	V	NB
.25	1.05	.025	.015	.24	.06	.12	.03	.26	.002	.002

MERCURY, RADIUM OR OTHER ALPHA SOURCE MATERIALS IN ANY FORM HAVE NOT BEEN USED IN THE PRODUCTION OF THIS MATERIAL. NO WELD REPAIR HAS BEEN PERFORMED.

Approved ABS QA Mill. Certificate No. 00NN10108-X.

This material was melted and manufactured in the USA by basic Electric Furnace processes to meet specification: ASTM A529-05 GRADE 50

The tensile values stated in either inch-pound units or SI units are to be regarded as separate as defined in the ASTM scope for this material. Unless a metric specification is ordered, this material has been tested and meets the requirements of the inch-pound ranges.

This is to certify the above to be a true and accurate report as contained in the records of this company.

Engineer of Tests: Charles R. Charlton





196 Bell Avenue  
CARNEGIE, PA 15106

**CERTIFICATION OF MATERIAL**

**CUSTOMER:** UNION METAL CORP  
1432 MAPLE AVE NE  
CANTON, STARK  
OH 44705-1720

**SALES ORDER NUMBER:** 11112756 000030  
**CUSTOMER PURCHASE ORDER:** 17447  
**CUSTOMER PART NUMBER:**  
**DELIVERY NUMBER:** 81673096 000020

**MATERIAL NUMBER:** 160000156  
**INVENTORY DESCRIPTION:**

**FINISHED ITEM DESCRIPTION:** CARB Bar RD HR A36  
0.625" X 240"

**HEAT NUMBER (s)**      **SLAB/COIL/TEST NUMBER (if applicable)**  
E2916

**CERTIFICATION**

A survey of our material sources has indicated that neither mercury nor radioactive substances is introduced into their products, or is used in any of their processes. While we make no independent tests for mercury or radiation, there is nothing in Ryerson's system which could be expected to introduce contamination of either type.

This document certifies that the material described above was shipped in accordance with your order. The producer of the material has certified to Ryerson that it was produced in accordance with the following spec:

ASTM A36      ASME SA36

07/21/2008

Authorized Agent of Ryerson

5-464205

**CERTIFIED TEST REPORT**

**NUCOR**  
 BAR MILL-AUBURN  
 NUCOR STEEL AUBURN, INC.

P.O. BOX 2008  
 QUARRY ROAD  
 AUBURN, NY 13021

480 pcs. = 9984  
 HEAT# E2916  
 DATE SHIPPED 6/11/2008  
 SHIPMENT# 0316836  
 SIZE: RD 5/8 20' 0"  
 ORDER ITEM# 202865/01  
 SOLD TO: RYERSON TULL-EAST  
 FAX#/EMAIL: 4122766664

CUST. P.O. 4500206939  
 PART #: 160000156  
 GRADE: ASTM A36-05/CSA 44W  
 SPEC A709-06A GR36  
 SUPP. REQ:  
 SHIP TO: RYERSON - PITT

**CHEMICAL ANALYSIS %**

C	150	750	190	014	039	370	0900	140	025	015	000	0020	0010	0002	XXX	XXX
	SI	P	S	CU	NI	CR	MO	SN	V	CB	TI	B	N2	O2		

**CHARPY IMPACT TEST**

TEMP. F.	FT./LB.	SUBSIZE SPECIMEN	SAMPLE

**MECHANICAL RESULTS**

YIELD	TENSILE	GAUGE	% ELONG	BEND	ELONG	% ELONG	R.A.
51.50	71.70	8	25.0	0	0	0	0
52.00	72.90	8	26.2	0	0	0	0
MPa	MPa	GAUGE	% ELONG	BEND	ELONG	% ELONG	R.A.

Grain Size	XXX	Reduction Ratio	XXX	As-Rolled Hardness	XXX	D.I.	XXX	C.F.	.370	C.I.	XXX
------------	-----	-----------------	-----	--------------------	-----	------	-----	------	------	------	-----

**JOMINY END-QUENCH HARDENABILITY RESULTS (HRC)**

J1	J2	J3	J4	J5	J6	J7	J8	J9	J10	J11	J12
J13	J14	J15	J16	J18	J20	J22	J24	J26	J28	J30	J32

I CERTIFY THESE RESULTS TO BE CORRECT AS CONTAINED IN THE RECORDS OF THE COMPANY.

JIM BIERNAT, METALLURGIST  
 STATE OF NEW YORK  
 COUNTY OF CAYUGA

Jim Biernat

(print)

AFTER BEING DULY SWORN BY ME, I DECLARE THAT: THESE RESULTS ARE CORRECT AS CONTAINED IN THE RECORDS OF NUCOR STEEL AUBURN, INC

*Jim Biernat*

(sign)

SUBSCRIBED AND SHOWN BEFORE ME

ALL MANUFACTURING PROCESSES FOR THIS STEEL, INCLUDING MELTING FROM SCRAP AND HOT ROLLING HAVE BEEN PERFORMED IN THE U.S.A. NO WELD REPAIR PERFORMED. STEEL NOT EXPOSED TO MERCURY OR ANY LIQUID ALLOY WHICH IS LIQUID AT AMBIENT TEMPERATURES.

THIS \_\_\_\_\_ DAY OF \_\_\_\_\_

L.S. \_\_\_\_\_

THIS CERTIFICATE IS NOTARIZED ONLY WHEN REQUESTED

**CUSTOMER SPECIAL INSTRUCTIONS:**

A36 CERTIFIED TO ASME SA36 1998 EDITION AND ASTM A709-97A GR.36. THIS WAS PRODUCED UNDER AUBURN QUALITY PROGRAM AUDITED 5/13/93 BY J.T. RYERSON CONFORMS TO JTR #0103-T,C-001 & 2150-U STRAND CAST FROM 5" BLT., SILICON KILLED, REDUCTION RATIO > 8/1

BB/00625  
 155800

501668



**TECHNICAL STAMPING, INC.**

50600 E. RUSSELL SCHMIDT BLVD.  
CHESTERFIELD TWP., MI 48051  
PH(586)948-3285 / FX(586)948-3286

**MATERIAL CERTIFICATION**

CUSTOMER NAME	CUSTOMER ORDER NUMBER	DATE
---------------	-----------------------	------

Flexalloy Inc.	P218096	2/6/08
----------------	---------	--------

PART NUMBER	CUSTOMER LOT NO.	LOT NUMBER	QUANTITY
-------------	------------------	------------	----------

1-1/4" F436 Hdg	125NWA30G	1207-813H	6,000
-----------------	-----------	-----------	-------

STEEL GRADE	HEAT	C	MN	P	S	SI	AL	REVISION
SAE 1050	2141028	.54	.75	.009	.002	.037	.047	ASTM F-436-04

SPECIFICATION	ACTUAL	GAUGE
---------------	--------	-------

O.D -	2.469 - 2.531	2.503 - 2.505 CALIPER
-------	---------------	--------------------------

I.D -	1.375 - 1.438	1.387 - 1.390 CALIPER, PIN GAUGE
-------	---------------	-------------------------------------

THICKNESS-	.136 - .177	0.139 MICROMETER
------------	-------------	---------------------

FLAT-	Max .010	.005 CALIPER
-------	----------	-----------------

HEAT TREAT -	38 - 45 HRC	40 - 43
--------------	-------------	---------

PLATING-		See Cert
----------	--	----------

OTHER		N / A
-------	--	-------

WE HEARBY CERTIFY THIS PRODUCT WAS PRODUCED UNDER A ISO-9001:2000 QUALITY ASSURANCE SYSTEM. ISO-9001:2000 CERTIFICATION NUMBER-1285 - DATE OF REGIS. JAN. 3, 2003  
ALL MATERIALS ARE MADE AND MELTED IN THE U.S.A. THIS PRODUCT WAS MANUFACTURED IN CHESTERFIELD, MICHIGAN, U.S.A. THIS PRODUCT CONFORMS TO ALL REQUIREMENTS  
FOR WASHERS AS PRODUCED ACCORDING TO A.S.T.M. F-436-04. THE ABOVE TEST RESULTS APPLY ONLY TO THE ITEMS TESTED. THIS TEST REPORT MUST NOT BE REPRODUCED  
EXCEPT IN FULL WITHOUT PRIOR WRITTEN APPROVAL.

AUTHORIZED SIGNATURE

CERTIFIED ISO 9001:2000

4148

**INDUSTRIAL STEEL TREATING COMPANY, INC**

501668

613 Carroll Street Jackson, MI 49202  
P.O. Box 98 Jackson MI, 49204  
Voice: 517-787-6312 Fax: 517-787-5441

**HEAT TREAT CERTIFICATION**

Customer:  
TECHNICAL STAMPING, INC.  
Attn:  
50600 E. RUSSELL SCHMIDT  
CHESTERFIELD, MI 48051

Certification Date:  
12/20/2007  
Page: 1 of 1



**Order Details**

Part Number: F0114	Blue Print Rev: 1279
Packing Slip: 4444	Material Type: 1030 -1050
Purchase Order:	Quantity: 40,029
IST Order Number: 634940-1	Net Weight: 5,404.0
Lot Number: 1207-813	Part Desc: WASHER
Heat Number:	Comments: 4 TUB #401,712,100,523 1395,1528,1557,1610,1652 11117,13028,13377

**SPECIFICATIONS**

**RESULTS**

HRC 38 -45

HRC 40 -43

Approval:

Tom Levy - Quality Assurance Supervisor

Contact

Tom Levy - Quality Assurance Supervisor  
Voice: 517-780-9043 Fax: 517-787-5441  
E-Mail: tolevy@indstl.com

4148

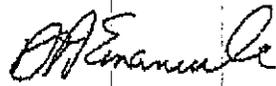
501668

PAGE 1 of 1  
 \*\*\* W C I S T E E L \*\*\*  
 METALLURGICAL SERVICES INC.  
 1040 PINE AVE. SE  
 WARREN, OHIO 44483-6528  
 970001

MELTED AND MANUFACTURED IN USA  
 PURCHASE ORDER:  
 11/06/07 004139  
 SP

CERTIFICATE OF TESTS  
 DATE/INVOICE: 11/28/07 690635314  
 WCI ORDER: 241 19 20017 02

SOLD TO:  
 SABRE STEEL INC  
 23680 RESEARCH DR  
 FARMINGTON HILLS MI 48335  
 SHIP TO:  
 SABRE STEEL INC  
 C/O VOSS STEEL  
 7925 BEECH DALY AVE  
 TAYLOR MI 48180

I certify that the properties of the items tested are true and accurate. Material was sampled, tested and inspected in accordance with the methods prescribed in the governing specifications. Subject material also conforms to the requirements of the governing specifications. This report shall not be reproduced except in full.  
 D.H. Emanuele  
 President  


All tests are conducted in-house unless noted with an asterisk.

Item	Specification and Description	03:15:34
2	HR SHEET HI-CARBON SAE-1050 AK FG SPECIFIED HARDNESS NON-TEMPER ROLLED REST THICK REST CHEM .136M P008M000 X 37.000 ME X COILS COIL WGT .30000MN/37000MX HEAT-NO 2141028 K925001 COIL NUMBERS HEAT-NO 2141028 C .54 MN .75 P .009 S .002 SI .037 CU .03 NI .05 MO .01 SN AL V CB B .02 .01 .002 .047 .000 .000 .000 TI .001 ZR CA CE SB H N O .0001 .000 .000 .0029	
EU	WASHER STOCK	
TI	01 C R/A INFO@SABRESTEEL.COM	
CH	C 50/55 MN 70/90 P 025MX S 010MX AK FINE GRAIN	

501668

# ROGERS BROTHERS INC.



HOT DIP GALVANIZING

February 1, 2008

Technical Stamping  
50600 E. Russell Schmidt  
Chesterfield TWP, MI 48051

To Whom It May Concern:

This is to certify that the hot dip galvanizing of the following washers on your Purchase Order number 1522 conforms to specification ASTM A-153. The following sizes and lot numbers comply with the coating, workmanship, finish, and appearance requirements of ASTM F2329 specifications.

PIECES	PART# & SIZE	LOT NUMBER	AVERAGE ZINC COATING IN MILS.
267,768	RU0058 5/8"	0108-842	3.31
23,767	RU0100 1"	0108-845	5.13
55,463	FO058 5/8"	1106.425	4.55
105,725	FO078 7/8"	1207-834	3.44
50,368	FO078 7/8"	1207-816	3.05
31,132	FO114 1-1/4"	1207-813	2.95

This certification in no way implies anything other than the quality of our hot dip galvanizing as it pertains to your order.

Yours very truly,

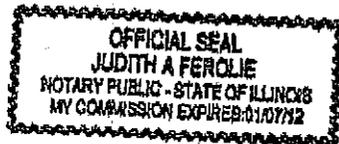
ROGERS BROTHERS INC.

*Lorraine P. Shelburne*

Lorraine P. Shelburne  
Vice President

SUBSCRIBED AND SWORN  
BEFORE ME THIS 1ST  
DAY OF JANUARY 2008, AD

*Judith A. Ferolie*  
NOTARY PUBLIC



502127



**TECHNICAL STAMPING, INC.**

50600 E. RUSSELL SCHMIDT BLVD.  
 CHESTERFIELD TWP., MI 48051  
 PH(586)948-3285 / FX(586)948-3286

**MATERIAL  
 CERTIFICATION**

CUSTOMER NAME	CUSTOMER ORDER NUMBER	DATE
Flexalloy Inc.	P232929	8/13/08

PART NUMBER	CUSTOMER LOT NO.	LOT NUMBER	QUANTITY
2" F436 Hdg	200NWA30G	0508-023H	1,020

STEEL GRADE	HEAT	C	MN	P	S	SI	AL	REVISION
SAE 1050	2131928	.53	.79	.014	.003	.037	.057	ASTM F-436-04

SPECIFICATION	ACTUAL	GAUGE
O.D - 3.688 - 3.812	3.729 - 3.732	CALIPER
I.D - 2.125 - 2.188	2.154 - 2.157	CALIPER, PIN GAUGE
THICKNESS- .178 - .195	.190	MICROMETER
FLAT- Max .010	.005	CALIPER
HEAT TREAT - 38 - 45 HRC	41 - 43	
PLATING-	See Cert	
OTHER	N/A	

WE HEREBY CERTIFY THIS PRODUCT WAS PRODUCED UNDER A ISO-9001:2000 QUALITY ASSURANCE SYSTEM. ISO-9001:2000 CERTIFICATION NUMBER-1265 - DATE OF REGIS. JAN. 3, 2003  
 ALL MATERIALS ARE MADE AND MELTED IN THE U.S.A. THIS PRODUCT WAS MANUFACTURED IN CHESTERFIELD, MICHIGAN, U.S.A. THIS PRODUCT CONFORMS TO ALL REQUIREMENTS  
 FOR WASHERS AS PRODUCED ACCORDING TO A.S.T.M. F-436-04. THE ABOVE TEST RESULTS APPLY ONLY TO THE ITEMS TESTED, THIS TEST REPORT MUST NOT BE REPRODUCED  
 EXCEPT IN FULL WITHOUT PRIOR WRITTEN APPROVAL.

  
 AUTHORIZED SIGNATURE

CERTIFIED ISO 9001:2000

4329

INDUSTRIAL STEEL TREATING COMPANY, INC

613 Carroll Street Jackson, MI 49202  
P.O. Box 98 Jackson MI, 49204  
Voice: 517-787-6312 Fax: 517-787-5441

502127

HEAT TREAT CERTIFICATION

Customer:  
TECHNICAL STAMPING, INC.  
Attn:  
50600 E. RUSSELL SCHMIDT  
CHESTERFIELD, MI 48051

Certification Date:  
05/07/2008



Page: 1 of 1

Order Details

Part Number: F0200  
Packing Slip: 4512  
Purchase Order:  
IST Order Number: 694460-1  
Lot Number: 0508-023  
Heat Number: 2131928

Blue Print Rev: 1279  
Material Type: 1030 - 1050  
Quantity: 3,496  
Net Weight: 1,346.0  
Part Desc: WASHER  
Comments: 1 TUB #820  
4319,4446,9039,2276,90012  
92759

SPECIFICATIONS

HRC 38 - 45

RESULTS

HRC 41 - 43

Approval:

Tom Levy - Quality Assurance Supervisor

Contact

Tom Levy - Quality Assurance Supervisor  
Voice: 517-780-9043 Fax: 517-787-5441  
E-Mail: tolevy@indstl.com

This Certification cannot be reproduced except in full, without written authorization from Industrial Steel Treating Company, LLC.

4329

502127

PAGE 1 of 1		*** W C I S T E E L *** METALLURGICAL SERVICES INC. 1040 PINE AVE. SE WARREN, OHIO 44483-6528		760602					
MELTED AND MANUFACTURED IN USA		PURCHASE ORDER: 01/11/08 004183-5							
C E R T I F I C A T E O F T E S T S		DATE/INVOICE: 03/19/08 690639653 WCI ORDER: 241 19 22227 01							
SOLD TO: SABRE STEEL INC 23680 RESEARCH DR FARMINGTON HILLS MI 48335		SHIP TO: SABRE STEEL INC C/O VOSS STEEL 7925 BEECH DALY AVE TAYLOR MI 48180							
I certify that the properties of the items tested are true and accurate. Material was sampled, tested and inspected in accordance with the methods prescribed in the governing specifications. Subject material also conforms to the requirements of the governing specifications. This report shall not be reproduced except in full.				D.H. Emanuele President 					
All tests are conducted in-house unless noted with an asterisk.				03:15:28					
Item	Specification and Description								
1	HR SHEET HI-CARBON SAE-1050 AK FG SPECIFIED HARDNESS NON-TEMPER ROLLED REST THICK REST CHEM T/R .189M P010M000 X 39.000 ME X COILS COIL WGT 30000MN/39000MX								
	HEAT-NO 2131928 C186101 2142175 C186401								
	COIL NUMBERS								
	HEAT-NO 2131928	C .53	MN .79	P .014	S .003	SI .037	CU 05	NI .03	CR .06
		MO .01	SK .005	AL .057	V .000	CB .000	B 0000	TI .001	ZR
		CA .0018	CE .000	SB .002	H .0036	N .0036	O		
	2142175	C .51	MN .79	P .007	S .004	SI .036	CU 05	NI .04	CR .06
		MO .01	SN .005	AL .049	V .000	CB .000	B 0500	TI .001	ZR
		CA .0001	CE .000	SB .001	H .0032	N .0032	O		
EO WASHER STOCK									
TI 01 C 3/A INFC@SABRESTEEL.COM									
CH C 5C/55 MN 70/90 P 025MX S 010MX AK FINE GRAIN									

502127

# ROGERS BROTHERS INC.

HOT DIP GALVANIZING

July 18, 2008

Technical Stamping  
50600 E. Russell Schmidt  
Chesterfield TWP, MI 48051

To Whom It May Concern:

This is to certify that the hot dip galvanizing of the following washers on your Purchase Order number 1529 conforms to specification ASTM A-153. The following sizes and lot numbers comply with the coating, workmanship, finish, and appearance requirements of ASTM F2329 specifications.

<u>PIECES</u>	<u>PART# &amp; SIZE</u>	<u>LOT NUMBER</u>	<u>AVERAGE ZINC COATING IN MILS.</u>
39,272	BBW-S00 1-3/4"	0108-868	3.92
257,500	F0012 1/2"	0508-029	3.33
52,750	F0012 1/2"	0508-027	3.28
45,250	F0058 5/8"	0508-061	3.46
79,600	F0100 1"	0408-009	3.47
12,480	F0134 1-3/4"	0508-048	2.99
5,400	F0200 2"	0508-023	3.96
6,715	F0112 1-1/2"	0408-008	2.95
47,375	F0078 7/8"	0608-083	3.28
65,875	F0034 3/4"	0508-068	3.52

This certification in no way implies anything other than the quality of our hot dip galvanizing as it pertains to your order.

Yours very truly,

ROGERS BROTHERS INC.

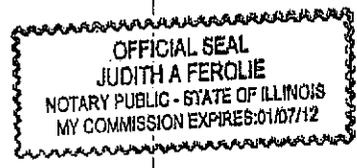
*Lorraine P. Shelburne*

Lorraine P. Shelburne  
Vice President

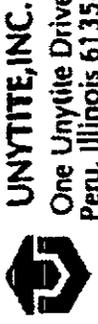
LPS:dl

SUBSCRIBED AND SWORN  
BEFORE ME THIS 18TH  
DAY OF JULY 2008, AD

*Judith A Ferolie*  
NOTARY PUBLIC



# INSPECTION CERTIFICATE



**UNYTTITE, INC.**  
 One Unyttite Drive  
 Peru, Illinois 61354  
 815-224-2221 — FAX# 815-224-3434

Customer	Specification	Lot No.	Date
DALLAS FASTER, INC. 1001 AVENUE M GRAND PRAIRIE, TEXAS 75050	ASTM A-36J GRADE DH HEAVY HEX NUT	ACB21	Apr. 12, '06
	Size H.D.G. 5/8-11 UNC 0.020" BLUE IYE		

Mechanical properties tested in accordance to ASTM F606/F606M, ASTM A370, ASTM E18

Chemical Composition (%)													
Mill Maker	Material Size	Heat No.	Spec.	C	Si	Mn	P	S	Cu	Ni	Cr	Mo	Shape & Dimension
REP	CARBON		0.20 0.55	0.23	0.60	0.040	0.050						ANSI B18.2.2 GOOD
	STEEL	S01412	0.21	0.23	0.70	0.011	0.009	0.01	0.02	1.00	0.18		ANSI B1.1 CLASS 2B GOOD
Mechanical Property Inspection													
Item	Proof Load	Cone Stripping	Hardness	Hardness	Absorbed Energy	Heat Treatment							
	33,900	-	24-38			T: MIN. 800° F							
Spec.	lbF	kN • kgf • lbf	.HRC	H88 • HB	J • kg/m • ft/lbf								
	n	n	27.5 27.4 27.8 29.0 29.0			Q: FORGING Q (H.Q.)  T: 1004° F/45M. (W.C.)							
Results	Results	Results	28.1	After 24 HxX		Q: Quenching T: Tempering ST: Solution Treatment							
	GOOD	-				" DH U"  Production Quantity 22,750 pcs.							
Remarks:													

Jean Margherio  
 Notary Public - State of Illinois  
 My Commission Expires 10/18/09

Material used for the nut was melted and manufactured in the USA. The nut was manufactured in the USA to the above specification.  
 We hereby certify that the material described has been manufactured and inspected satisfactorily with the requirement of the above specification.  
 \_\_\_\_\_  
 Chief of Quality Assurance Section

UMC # 501418



REPUBLIC TECHNOLOGIES INTERNATIONAL  
LORAIN HOT ROLLED BAR PLANT  
1907 E 28th Street  
Lorain, OH 44085

REPUBLIC TECHNOLOGIES INTERNATIONAL, LORAIN HOT ROLLED BAR PLANT IS Q15-8000 REGISTERED



In the Field of Chemical Testing Only Certified 4245 01 Valid to October 31, 2001

UMC # 501418

METALLURGICAL TEST REPORT

Sales Order No.: E116459	Delivery No. (BOL):	Vehicle ID(Carrier):	Purchase Order No.: 20421	P.O. Date: 12/28/1999
-----------------------------	---------------------	----------------------	------------------------------	--------------------------

Mail To: 242038900  
UNYTITE INC  
ATTN: JEFF DINELLI  
ONE UNYTITE DRIVE  
PERU, IL. 61354-9710

Sold To: 242038000  
UNYTITE INC  
ONE UNYTITE DRIVE  
PERU, IL. 61354-9710  
Ship To: 242038001  
UNYTITE INC  
ONE UNYTITE DRIVE  
PERU, IL. 61354-9710

Specification (BC) C.18/23 MN.60/35 P.030 MAX S.030 MAX SL15/35 CU.30 MAX NI.25 MAX CR.90/1.20 MO.15/30 FINE GRAIN COLD WORKING QUALITY PEEL & BURNISH REPORT JOMINY CLEANLINESS TENSILE POR INFO ONLY	Customer Information 4120
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MATERIAL INFORMATION

Item No. Material No. Material Description  
000001 0015213 0.859"

Heat  
S01412

HEAT CHEMISTRY ANALYSIS

Type: Bloom cast	Result	UOM	J.Pl.
Elem			J-1
C	0.21	%	J-2
Mn	0.70	%	J-3
P	0.011	%	J-4
S	0.009	%	J-5
Si	0.23	%	J-6
Cr	0.010	%	J-7
Ni	0.02	%	J-8
Co	1.00	%	J-9
Mo	0.179	%	J-10
Sb	0.001	%	J-11
Al	0.035	%	J-12
V	0.003	%	J-13
Cb	0.001	%	J-14
			J-15
			J-16
			J-18
			J-20

Result	UOM
43	HRC
43	HRC
39	HRC
34	HRC
30	HRC
29	HRC
27	HRC
26	HRC
25	HRC
25	HRC
24	HRC
23	HRC
22	HRC
21	HRC
21	HRC

C,S,N Determined by methods defined in ASTM E1019-94.  
Pd and Bi Determined by methods defined in ASTM E1065-95.  
All other elements determined by methods defined in ASTM E413-99.

Jominy hardenability determined by methods defined in ASTM A255-96.

DI VALUE

2.13 (Calculation utilizes 3 significant decimals for each element)

JK CLEANLINESS - AVG RESULTS \*

AT	=	1.7
AH	=	0.0
BT	=	0.7
BH	=	0.0
CT	=	0.0
CH	=	0.0
DT	=	0.5
DH	=	0.0

AUSTENITIC GRAIN SIZE \*

Austenitic Grain Size 5 or Finer Based on Total Aluminum equal to or greater than 0.020% per ASTM A29-93a.

Microcleanliness determined by methods defined in ASTM E45-97 Method A.

END QUENCH HARDENABILITY TEST RESULTS \*

Austenitize Temperature 1700 degs. F  
Cool Test

This is to certify that the product described herein was manufactured, sampled, tested and/or inspected in accordance with the specifications and quality requirements in such respect. The results in this report are applicable only to the items described herein and are correct as contained in the records of the company. Results indicated with an asterisk (\*) are not covered under the scope of accreditation. Results indicated by two asterisks (\*\*) were performed by a non accredited third party laboratory and are not certified by Republic Technologies International. Republic Technologies International certifies that this product was tested and manufactured in the USA.  
Prepared by the office of: James C. Cash, Director, Quality Assurance for Rolled Bar Division, date: 04/05/2000

This Report May Not Be Reproduced Except in Full  
UQ5020 Rev A 2/1/99

*James C. Cash*



REPUBLIC TECHNOLOGIES  
INTERNATIONAL  
LORAIN HOT ROLLED BAR  
PLANT

REPUBLIC TECHNOLOGIES  
INTERNATIONAL, LORAIN HOT  
ROLLED BAR PLANT IS  
QS-9000 REGISTERED



UMC# 501418

Sales Order No.: 8116459	Delivery No. (BOL):	Vehicle ID(Carrier):	Purchase Order No.: 20421	P.O.Date: 12/28/1999
-----------------------------	---------------------	----------------------	------------------------------	-------------------------

**AS ROLLED TENSILE \***

Type	Min	Max	Avg. Uom
Tensile Strength	103500	103500	103500 PSI
Elongation in 2"	27.0	27.0	27.0 %
Elongation in 8"	12.0	12.0	12.0 %
Reduction of Area	46.2	46.2	46.0 %

Mechanical properties determined by methods defined in ASTM E8-99 and ASTM A370-97a.

**REDUCTION RATIO**

277.25:1 Bloom Cast

This is to certify that the product described herein was manufactured, sampled, tested and/or inspected in accordance with the specifications and quality requirements in each respect. The results in this report are applicable only to the items described herein and are correct as contained in the records of the company. Results indicated with an asterisk (\*) are not covered under the scope of accreditation. Results indicated by two asterisks (\*\*) were performed by a not accredited third party laboratory and are not certified by Republic Technologies International. Republic Technologies International certifies that this product was tested and manufactured in the USA.  
Prepared by the office of: James C. Cook, Director, Quality Assurance Hot Rolled Bar Division.  
Date: 04/05/2000

**This Report May Not Be Reproduced Except in Full**  
UQS020 Rev A 2/1/99

*James C. Cook*

UMC # 501418

Universal Galvanizing, Inc.  
107 Dutton Drive  
St. Peters, Missouri 63376  
(636) 970-2272

CERTIFICATE OF COMPLIANCE  
FOR HOT DIP GALVANIZING

CUSTOMER : Unytite, Inc.  
DATE : April 03, 2006  
ORDER NO : 35757  
LOT NO. : AC821  
ITEM : A563 DH HHN Nut  
SIZE : 5/8-11 0.031

WE HEREBY CERTIFY THAT THE ABOVE SIZE AND LOT  
NUMBER WHICH WAS HOT DIP GALVANIZED IN OUR PLANT  
MEET THE SPECIFICATIONS OF ASTM-A153 CLASS C.

AVERAGE THICKNESS OF ZINC COATING : 4.3 MILS

*David Gehris*  
David Gehris, QUALITY CONTROL

- Specializing in Hot Dip Galvanizing -

# INSPECTION CERTIFICATE

Customer	Specification ASTM A-303	Lot No.	Date
	GRADE DH HEAVY HEX NUT	KT041	Sep. 26, '07
	Size H.D.G. 1-1/4-7 UNC 0.024" BLUE HYE		


**UNYRITE, INC.**  
 One Unyrite Drive  
 Peru, Illinois 61354  
 815-224-2221 — FAX# 815-224-3434

Mechanical properties tested in accordance to ASTM F606/F606M, ASTM A370, ASTM E18

Chemical Composition (%)												
Material	Spec	C	Si	Mn	P	S	Cu	Ni	Cr	Mo	Heat Treatment	
											MIN.	MAX.
STEEL	M25706	0.46	0.26	0.81	0.010	0.033	0.12	0.05	0.11	0.02		
Mechanical Property Inspection												
Item	Proof Load	Cone Stripping	Hardness	Hardness		Absorbed Energy						
Spec.	145,350		24-38	H <sub>B</sub>	H <sub>B</sub>	J • kgfm • ftlb		T: MIN. 800 F				
	5		H <sub>A</sub> C					Q: FORGING Q (N.Q.)				
Results	Results	Results	Results	After 24 HrX				T: 1193 F/45M. (W.C.)				
	GOOD							Q: Quenching T: Tempering ST: Solution Treatment				

Shape & Dimension	ANSI B18.2.2
Inspection	GOOD
Thread Precision	ANSI B1.1
Inspection	CLASS 2B
Appearance	GOOD
Inspection	GOOD
Remarks:	* DR U=
	Production Quantity 21,454 pcs.

5025205

Material used for the nut was melted and manufactured in the USA. The nut was manufactured in the USA to the above specification.  
 We hereby certify that the material described has been manufactured and inspected satisfactorily with the requirement of the above specification.

  
 Chief of Quality Assurance Section



Quanex

502523

MacSteel

ONE JACKSON SQUARE  
SUITE 500  
JACKSON, MICHIGAN 49201

CERTIFIED MATERIAL TEST REPORT

CUSTOMER ORDER NUMBER P001787	CUSTOMER PART NUMBER B1045SC15625	HEAT NUMBER M25706	WORK ORDER NUMBER 210547 101	DATE 9/06/07
----------------------------------	--------------------------------------	-----------------------	---------------------------------	-----------------

REPORT TO  
TRACI  
UNYTITE, INC.

ONE UNYTITE DRIVE  
PERU, IL 61354-9710

SHIP TO

UNYTITE, INC.

ONE UNYTITE DRIVE  
PERU, IL 61354

ORDERED

GRADE 1045	SIZE 1 9/16" RND	LENGTH 24' 10 1/2"
---------------	---------------------	-----------------------

CUSTOMER SPECIFICATIONS  
SAE 1045; ASTM E381-01

CHEMICAL ANALYSIS - (BAR AVERAGE)

C	Mn	P	S	Si	Ni	Cr	Mo	Cu	Sn	Al
0.45	0.81	0.010	0.033	0.26	0.05	0.11	0.02	0.12	0.006	0.003
V	Nb									
0.065	0.001									

GRAIN SIZE SPECIFICATION ASTM E112 FINE GRAIN 5-8

MACROCLEANLINESS SPECIFICATION ASTM E381

	PLATE I			PLATE II
AVERAGE	S	R	C	NONE
	1	1	1	

DECARB SPECIFICATION ASTM E1077

F TOTAL= 0.006

PAGE 1

We certify that these data are correct and in compliance with specified requirements.

MacSteel Monroe  
3000 East Front Street  
Monroe, MI 48161

Quality Assurance Representative

CONTINUED ON PAGE 2

# ROGERS BROTHERS INC.

HOT DIP  
GALVANIZING

502523

September 25, 2007

Unytite, Inc.  
Unytite Quality Department  
One Unytite Drive  
Peru, IL 61354

To Whom It May Concern:

This is to certify that the hot dip galvanizing of the following material on your Purchase Order number 1995 conforms to specification ASTM A-153.

10 Containers	1-1/4" A563 DH HHN	Lot#KT031	3.80 Avg. Mils.
10 Containers	1-1/4" A563 DH HHN	Lot#KT041	3.52 Avg. Mils.

This certification in no way implies anything other than the quality of our hot dip galvanizing as it pertains to your order.

Yours very truly,

ROGERS BROTHERS INC.

*Lorraine P. Shelburne*

Lorraine P. Shelburne  
Vice President

SUBSCRIBED AND SWORN  
BEFORE ME THIS 25TH  
DAY OF SEPTEMBER 2007, AD

*Judith A. Ferolie*  
NOTARY PUBLIC





# CERTIFICATE OF COMPLIANCE

Date December 16, 2008	Project No. CENTRAL & TYLER, WICHITA, KS	Order No. 9902	Customer's Order No. 08-521-1
---------------------------	---	-------------------	----------------------------------

**CUSTOMER: MID AMERICAN SIGNAL INC.**

WE CERTIFY THAT THE MATERIALS USED ON THIS PROJECT ARE IN COMPLIANCE WITH THE REQUIREMENTS ON THIS ORDER.

THE MATERIAL USED ON THIS PROJECT WAS PRODUCED IN THE UNITED STATES AND THE ATTACHED CERTIFICATIONS REPRESENT THE MATERIAL USED ON THIS PROJECT.

MATERIAL CERTIFICATIONS:

MATERIAL	SPECIFICATIONS	HEAT NUMBER	GRADE	CYCLE
3 GA TUBE	A595	4188548	A	279
7 GA TUBE	A595	4189358	A	279
3/4" SCH 40	A500	E81353		
1/2" SCH 80	A500	TCP5B48399		
1/4" GUSSET	A36	4157582		
3/8" CLAMP PLATE	A36	8107869		
2" POLE PLATE CHARPY	A36	T1668		
3/4" X 3/4" X 1/8" CLIP	A36	N540863		
1/4" X 1" SUPPORT BAR	A36	E4974		
1/2" X 2-1/2" STL HH FRAME	A529	JG3269		
5/8" STUD - 5/8" ROUND BAR	A36	E2916		
501668 1-1/4" WASHER	F-436	2141028		
502127 2" WASHER	F-436	2131928		
501418 5/8" NUT	A563	S01412		
502523 1-1/4" NUT	A563	M25706		

This Certificate Notarized Only When Required

**JENNIFER WAGNER**

A Notary Public, do hereby certify that this affidavit was subscribed and sworn to before me by a duly authorized agent of the Union Metal Corporation.

This is to certify that the foregoing data is a true copy of the data furnished to us by the producing mill and from data resulting from tests performed at Union Metal Corporation

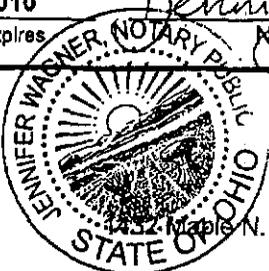
16<sup>th</sup> day of December 2008

By

October 17, 2010

My commission expires

Notary Public





QF-308, TEST.A-595,  
Rev.2,Certified.Test.Reports.  
grossman.5/16/06

MATERIALS MELTED AND MANUFACTURED IN THE USA

CERTIFIED TEST REPORT

ITEM NO	DIMENSIONS	HEAT NUMBER	ASTM SPEC. NUMBER	DATE	CYCLE NO.	CUSTOMER ORDER NO.
				12-2-08	279	
				GRADE	PURCHASE ORDER	MANUFACTURER
1	11 GAGE		A595	A		
2	7 GAGE					
3	3 GAGE	4188548			18594	ARCELORMITTAL
4	0 GAGE	4167113			15812	ARCELORMITTAL

ITEM NO	MECHANICAL TESTS						TEST NO
	YIELD STRENGTH PSI	ULTIMATE STRENGTH PSI	% ELONG. IN 2"	BEND TEST	%RED AREA		
1							
2							
3	55689	65938	33.0			10593	
4	55195	67665	33.5			10592	

ITEM NO	CHEMICAL ANALYSIS											
	C	Mn	P	S	SI	Cu	Al	NI	Cr	Mo	V	N
1												
2												
3	.20	.80	.015	.006	.02	.04	.052	.01	.03	.01	.002	.0042
4	.20	.73	.008	.008	.01	.04	.063	.02	.03	.01	.000	.0025

This Certificate Notarized Only When Required

I, RENE L. GROSSMAN a Notary Public do Hereby certify that this affidavit was subscribed and sworn to before me by a duly authorized signatory of the Union Metal Corporation.

This is to certify that the foregoing data is a true copy of the data furnished to us by the producing mill and from data resulting from tests performed at Union Metal Corporation.

this 9TH day of DECEMBER, 2008

UNION METAL CORPORATION

January 31, 2010  
MY COMMISSION EXPIRES



BY [Signature]

# PRODUCT CERTIFICATION

WORK ORDER LOT NUMBER  
**FC2870 4188548**  
 SALES ORDER / RLS  
**411211 / 1**

ArcelorMittal Cleveland Inc.



SOLD TO 000786-000

**UNION METAL**  
**1935 16TH ST N.E. & HARRISBURG ROAD N.E.**  
**CANTON, OH 44705**  
**USA**  
**Attn: Renee Grossman**

CUSTOMER P.O. <b>18594-11</b>	CUSTOMER PART <b>3GA62-1/2-UMS28/R0</b>	QUANTITY <b>41,920 LBS</b>	COILS <b>1</b>	LADING NO <b>01268789</b>	SHIPMENT DATE <b>10/08/2008</b>					
SPECIFICATION 0.2470 Min -0.0000/ +0.0260 X 63.0000 + 1.5000 ME(IN) ID 24.0/30.0 OD 60.7/80.0 (IN) CL WT 40000/50000 (LBS) Hot Band Prime Carbon Structural Steel UMS 28 Change Stock- Brandle UEXP										
CERTIFICATION REQUIREMENTS <b>UNION METAL SPEC UM-S28 DTD 10/5/94 SAE-1021 CS STRUCTURAL STEEL</b>										
<b>Chemical</b>										
C	Mn	P	S	Si	Cu	Ni	Cr	Mo	Sn	Al
0.2000	0.8000	0.0150	0.0060	0.0200	0.0400	0.0100	0.0300	0.0100	0.0070	0.0520
V	Cb	N	B	Ti	Sb	Ca				
0.0020	0.0000	0.0042	0.0000	0.0020	0.0020	0.0001				
<b>Origin - Made and Melted in USA</b>										
<b>Tag Numbers</b>										
<b>695849</b>										

I certify that the material listed herein has been inspected and tested in accordance with the methods prescribed in the governing specifications and based upon the results of such inspection and testing had been approved for conformance to the specifications.

**Matthew Kremer**  
 QA Manager



QF-308, TEST.A-595,  
Rev.2, Certified Test Reports.  
grossman.5/16/08

MATERIALS MELTED AND MANUFACTURED IN THE USA

CERTIFIED TEST REPORT

ITEM NO	DIMENSIONS	HEAT NUMBER	ASTM SPEC. NUMBER	DATE	CYCLE NO.	CUSTOMER ORDER NO.
				12-2-08	279	
				GRADE	PURCHASE ORDER	MANUFACTURER
1	11 GAGE		A595	A		ARCELORMITTAL
2	7 GAGE	4189358				
3	3 GAGE	4188548				
4	0 GAGE	4167113				

MECHANICAL TESTS						
ITEM NO	YIELD STRENGTH PSI	ULTIMATE STRENGTH PSI	% ELONG. IN 2"	BEND TEST	%RED AREA	TEST NO
1						
2	61828	71195	32.3			10595
3	55689	65938	33.0			10593
4	55195	67665	33.5			10592

CHEMICAL ANALYSIS												
ITEM NO	C	Mn	P	S	SI	Cu	Al	Ni	Cr	Mo	V	N
1												
2	.22	.75	.009	.007	.02	.04	.063	.02	.03	.01	.001	.0032
3	.20	.80	.015	.006	.02	.04	.052	.01	.03	.01	.002	.0042
4	.20	.73	.008	.008	.01	.04	.063	.02	.03	.01	.000	.0025

This Certificate Notarized Only When Required

I, JENNIFER WAGNER a Notary Public do hereby certify that this affidavit was subscribed and sworn to before me by a duly authorized signatory of the Union Metal Corporation.

This is to certify that the foregoing data is a true copy of the data furnished to us by the producing mill and from data resulting from tests performed at Union Metal Corporation.

this 15TH day of DECEMBER, 2008

October 17, 2010  
MY COMMISSION EXPIRES



UNION METAL CORPORATION  
BY [Signature]

# PRODUCT CERTIFICATION

WORK ORDER LOT NUMBER

**FC2840 4189358**

ArcelorMittal Cleveland Inc.



**ArcelorMittal**

SALES ORDER / RLS

**411162 / 1**

SOLD TO 000786-000

**UNION METAL**

**1935 16TH ST N.E. & HARRISBURG ROAD N.E.**

**CANTON, OH 44705**

**USA**

**Attn: Renee Grossman**

CUSTOMER P.O. <b>18594/13</b>	CUSTOMER PART <b>7GA36-UMS28/R0</b>	QUANTITY <b>35,890 LBS</b>	COILS <b>1</b>	LADING NO <b>01271956</b>	SHIPMENT DATE <b>10/16/2008</b>					
SPECIFICATION 0.1770 Min -0.0000/ +0.0140 X 36.5000 + 1.1250 ME(IN) ID 24.0/30.0 OD 66.2/80.0 (IN) CL WT 29200/36500 (LBS) Hot Band Prime Carbon Structural Steel UMS 28 Change Stock- Brandle UEXP										
CERTIFICATION REQUIREMENTS <b>Union Metal Spec UM-S28 DTD 10/5/94 SAE 1021 Mod Structural Steel</b>										
<b>Chemical</b>										
<b>C</b>	<b>Mn</b>	<b>P</b>	<b>S</b>	<b>Si</b>	<b>Cu</b>	<b>Ni</b>	<b>Cr</b>	<b>Mo</b>	<b>Sn</b>	<b>Al</b>
0.2200	0.7500	0.0090	0.0070	0.0200	0.0400	0.0200	0.0300	0.0100	0.0050	0.0630
<b>V</b>	<b>Cb</b>	<b>N</b>	<b>B</b>	<b>Ti</b>	<b>Sb</b>	<b>Ca</b>				
0.0010	0.0000	0.0032	0.0000	0.0020	0.0020	0.0002				
<b>Origin - Made and Melted in USA</b>										
<b>Tag Numbers</b>										
697334										

I certify that the material listed herein has been inspected and tested in accordance with the methods prescribed in the governing specifications and based upon the results of such inspection and testing had been approved for conformance to the specifications.

**Matthew Kremer**  
QA Manager



# Tubular Steel Inc

Since 1963  
"Performance you can count on"

Tubular Steel Inc  
1031 Executive Parkway Drive  
Saint Louis, MO 63141  
Phone: (314) 851-9200  
Fax: (314) 851-9336

Customer PO: 19247  
Union Metal  
P O Box 9920  
Canton, OH 44711

TSI Sales ID: SO-048508  
Date: 10-30-08

Fax: 330-456-1720  
MTR Recipient: Jim Burand

Page 1

### Cover sheet/Certificate of compliance

- \*\* The material listed below was purchased to the stated specification, when marked
- \*\* Documents for the material listed below are attached

Size	Item / Customer Part No.	Certification
1.050x0.109	RND CARB WELD AR SO075SCH40-A501	ASTM A500 B AND/OR C

Heat number	Apology status
E81353	

Size	Item / Customer Part No.	Certification
4.500x0.237	RND CARB WELD AR SO400SCH40-A501	ASTM A500 B AND/OR C

Heat number	Apology status
627433	
627597	
615874	
615871	

Size	Item / Customer Part No.	Certification
5.563x0.258	RND CARB WELD AR SO500SCH40-X52	ASTM A500 B AND/OR C

Heat number	Apology status
A17601	

- \*\* Material referenced on the test report is certified by the manufacturer to meet the specification indicated under the testing procedures established, including any allowable variance
- \*\* Mechanical and chemical properties reported on mill test reports are sample results only and do not represent minimum, maximum, or average values
- \*\* Data reported on attached documents has been computer verified to meet the requirements of the specification

BULL MOOSE TUBE GERALD FACILITY  
CERTIFICATION OF TESTS

05/28/08

Page 2 of 3

BULL MOOSE TUBES  
COMPANY

1818 Clarkson Rd.  
Chesterfield, Missouri 63017

BILL TO Tubular Steel, Inc.  
Attn: Accounts Payable  
1031 Executive Parkway Drive  
St. Louis MO 63141-6351

SHIP TO Tubular Steel, Inc.  
1700 Tubular Steel Road  
Slaughton

IL 62088-1076

B/L Number 168809

Ship Via

35\_F35

1.05" X 0.109 HR X 21' 6"										Order #		247728	
26.7 mm										Purchase Order #		2349	
ASTM A500-03 Grade B Melted & Manufactured in the USA										Item #		135735 0672	
Ticket # = 13047676										P			
Heat # = E81833										YLD psi		TSN psi ELN %	
C	MN	P	S	AL	SI	CB	CU	CR	NI	VA	YLD psi	TSN psi	ELN %
.170	.400	.007	.008	.037	.012	0.000	0.000	0.000	0.000	0.000	70168	74915	37
1.05" X 0.109 HR X 21' 6"										Order #		247728	
26.7 mm										Purchase Order #		2349	
ASTM A500-03 Grade B										Item #		135735 0672	
Ticket # = 13047672										P			
Heat # = E81385										YLD psi		TSN psi ELN %	
C	MN	P	S	AL	SI	CB	CU	CR	NI	VA	YLD psi	TSN psi	ELN %
.180	.410	.015	.001	.032	.027	0.000	0.000	0.000	0.000	0.000	71428	77408	30
1.05" X 0.109 HR X 21' 6"										Order #		247728	
26.7 mm										Purchase Order #		2349	
ASTM A500-03 Grade B										Item #		135735 0672	
Ticket # = 13047670										P			
Heat # = C45801										YLD psi		TSN psi ELN %	
C	MN	P	S	AL	SI	CB	CU	CR	NI	VA	YLD psi	TSN psi	ELN %
.050	.390	.020	.008	.028	.020	0.000	0.000	0.000	0.000	0.000	66722	68243	31
1.05" X 0.109 HR X 21' 6"										Order #		247728	
26.7 mm										Purchase Order #		2349	
ASTM A500-03 Grade B										Item #		135735 0672	
Ticket # = 13047671										P			
Heat # = E81396										YLD psi		TSN psi ELN %	
C	MN	P	S	AL	SI	CB	CU	CR	NI	VA	YLD psi	TSN psi	ELN %
.190	.510	.013	.010	.030	.010	0.000	0.000	0.000	0.000	0.000	72888	78858	28

Shipping Clerk:

*[Handwritten Signature]*

THIS WELDED STEEL TUBING IS MANUFACTURED IN THE UNITED STATES OF AMERICA AND HAS BEEN PRODUCED IN ACCORDANCE WITH THE STATED SPECIFICATION. LADLE CHEMISTRIES ARE REPORTED FROM DOCUMENTS PROVIDED BY THE SUPPLYING STEEL MILL. ANY PHYSICAL AND MECHANICAL TESTING RESULTS SHOWN ON THIS CERTIFICATION ARE CORRECT AS CONTAINED IN THE RECORDS OF THE COMPANY.



**Tubular Steel Inc**  
Since 1963  
 "Performance you can count on"

Tubular Steel Inc  
 1031 Executive Parkway Drive  
 Saint Louis, MO 63141  
 Phone: (314) 851-9200  
 Fax: (314) 851-9336

Customer PO: 19623  
 Union Metal  
 P O Box 9920  
 Canton, OH 44711

TSI Sales ID: SO-052407  
 Date: 11-20-08

Fax: 330-456-1720  
 MTR Recipient: Jim Burand

Page 1

Cover sheet/Certificate of compliance

- \*\* The material listed below was purchased to the stated specification, when marked
- \*\* Documents for the material listed below are attached

Size	Item / Customer Part No.	Certification
0.840x0.147	RND CARB WELD AR S0050SCH80-A501	

Heat number	Apology status
TCP5B46399	

Size	Item / Customer Part No.	Certification
1.660x0.140	RND CARB WELD AR S0125SCH40-A501	ASTM A500 B AND/OR C

Heat number	Apology status
U61810	

Size	Item / Customer Part No.	Certification
2.375x0.218	RND CARB WELD AR S0200SCH80-A501	ASTM A500 B AND/OR C

Heat number	Apology status
1802245	

Size	Item / Customer Part No.	Certification
1.750x0.188	RND CARB WELD CD D188X0175-A513	

- \*\* Material referenced on the test report is certified by the manufacturer to meet the specification indicated under the testing procedures established, including any allowable variance
- \*\* Mechanical and chemical properties reported on mill test reports are sample results only and do not represent minimum, maximum, or average values
- \*\* Data reported on attached documents has been computer verified to meet the requirements of the specification



**Sharon Tube Company**

166 MILL STREET  
 PO Box 408  
 SHARON, PA 16140  
 (800) 348-8118  
 (724) 961-1031 (RIN)

**PRODUCT CERTIFICATION**

HEAT NUMBER  
**top5b46399**  
 SALES ORDER  
**181588**

SOLD TO

SHIP TO

TUBULAR STEEL  
 1700 TUBULAR  
 STAUNTON, IL 62088  
 USA  
 Attn: Receiving

TUBULAR STEEL  
 1700 TUBULAR  
 STAUNTON, IL 62088  
 USA  
 Attn: Receiving

CUSTOMER P.O. 2413	CUSTOMER PART	QUANTITY 192 Pos	BNDLS 2	LADING NO 00002618	SHIPMENT DATE 03/27/2006					
SPECIFICATION CGP0840XhSoFe21 1/2", XH, SoL, PE, 21', 0.0", ASTM A53-Type F Grade A										
CERTIFICATION REQUIREMENTS										
<b>Chemical, Ladle Analysis, %</b>										
C	Mn	P	S	Si	Al	Cu	Ni	Cr	Mo	V
.12	.44	.020	.016	.016	.048	.013	.020	.022	.006	.001
Sn	SuM	CH								
.001	.050	.200								
<b>Pipe Mechanical Test Results</b>										
	Yield, PSI	Tensile, PSI	Elong, %-2"	Y/T Ratio	Hard, HB	Hydro, PSI	Bend	Flatten		
B00120/004	34480	54180	48	.636		850	Pass			
B00120/005	34480	54180	48	.636		850	Pass			
<p>Certified Test Report Type 3.1B in accordance with EN 10201/ISO 10474/DIN 50048. Material has not come in direct contact with mercury, any of its compounds or any mercury bearing devices during the manufactured process, tests or inspections. Material does not contain any polybrominated biphenyls (PBB) or polybrominated diphenyl ethers (PBDE).</p> <p>Welded Steel Pipe Meeting the Requirements of ASTM A53-05 Type F Grade A/ASME SA-53 Type F 2001 Edition, A03 Revision or ASTM A53-05 Type E Grade B/ASME SA-53 Type E Grade B 2001 Edition, A03 Revision. Each length of pipe Hydrostatically Tested. No weld repairs have been performed. Yield strength determined @ 0.2% offset. All bend or flatten tests passed. Manufactured in the U.S.A.</p> <p style="text-align: center;">End of Certification</p>										

Steven M. Grabart, Manager, Technical Services, being duly sworn according to law, deposes and says that the figures set forth above are correct, as contained in the figures of Sharon Tube Company.



QF-308, TEST.A-595,  
 Rev.1, Certified Test Reports. 5yrs.  
 Sbayala.5/16/01, SBA.UMC.QA

MATERIALS MELTED AND MANUFACTURED IN THE USA

<b>1/4" PLATE</b> <b>MEETS OR EXCEEDS ASTM A36</b> <b>TESTED TO ASTM A6</b>	<b>CERTIFIED TEST REPORT</b>	
	DATE <b>10-13-08</b>	CYCLE NO. CUSTOMER ORDER NO.

ITEM NO	DIMENSIONS	HEAT NUMBER	ASTM SPEC.		GRADE	PURCHASE ORDER	MANUFACTURER
			NUMBER				
1	3 GAGE	4157582	A36		A	16265	ARCELORMITTAL

MECHANICAL TESTS							
SMPL NO	YIELD STRENGTH PSI	ULTIMATE STRENGTH PSI	% ELONG.		BEND TEST	%RED AREA	TEST NO
			IN 2"	IN 8"			
1	47332	67572	31.0				N/A
2	46563	66084	32.0				N/A

ITEM NO	CHEMICAL ANALYSIS											
	C	Mn	P	S	SI	Cu	Al	NI	Cr	Mo	V	N
1	.22	.70	.006	.007	.02	.05	.062	.02	.03	.01	.000	.0035

This Certificate Notarized Only When Required

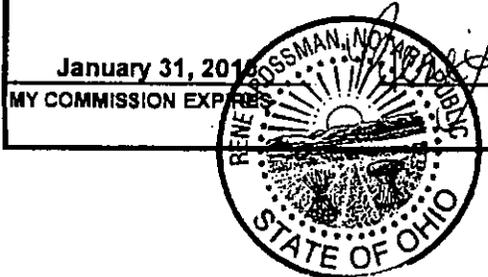
I, RENE L. GROSSMAN a Notary Public do Hereby certify that this affidavit was subscribed and sworn to before me by a duly authorized signatory of the Union Metal Corporation.

This is to certify that the foregoing data is a true copy of the data furnished to us by the producing mill and from data resulting from tests performed at Union Metal Corporation.

this 13TH day of OCTOBER, 2008

UNION METAL CORPORATION

BY:



# PRODUCT CERTIFICATION

WORK ORDER LOT NUMBER

**FB7019 4157582**

ArcelorMittal Cleveland Inc.



**ArcelorMittal**

SALES ORDER / RLS

**389908 / 1**

SOLD TO 000786-000

**UNION METAL**

**1935 16TH ST N.E. & HARRISBURG ROAD N.E.**

**CANTON, OH 44705**

**USA**

**Attn: Renee Grossman**

CUSTOMER P.O. <b>16265-18</b>	CUSTOMER PART <b>3GA55-1/2-UMS28/R0</b>	QUANTITY <b>48,990 LBS</b>	COILS <b>1</b>	LADING NO <b>01200751</b>	SHIPMENT DATE <b>06/18/2008</b>					
SPECIFICATION 0.2470 Min -0.0000/ +0.0240 X 56.0000 + 1.5000 ME(IN) ID 30.0/30.0 OD 63.5/69.3 (IN) CL WT 40000/50000 (LBS) Hot Band Prime Carbon Structural Steel UMS 28 Change Stock- Brandle UEXP										
CERTIFICATION REQUIREMENTS <b>Union Metal Spec UM-S28 DTD 10/5/94 SAE 1021 Mod Structural Steel</b>										
<b>Chemical</b>										
<b>C</b>	<b>Mn</b>	<b>P</b>	<b>S</b>	<b>Si</b>	<b>Cu</b>	<b>Ni</b>	<b>Cr</b>	<b>Mo</b>	<b>Sn</b>	<b>Al</b>
0.2200	0.7000	0.0060	0.0070	0.0200	0.0500	0.0200	0.0300	0.0100	0.0110	0.0620
<b>V</b>	<b>Cb</b>	<b>N</b>	<b>B</b>	<b>Ti</b>	<b>Sb</b>	<b>Ca</b>				
0.0000	0.0000	0.0035	0.0001	0.0010	0.0030	0.0003				
<b>Origin - Made and Melted in USA</b>										
<b>Tag Numbers</b>										
657771										

I certify that the material listed herein has been inspected and tested in accordance with the methods prescribed in the governing specifications and based upon the results of such inspection and testing had been approved for conformance to the specifications.

**Matthew Kremer**  
QA Manager



# Mill Test Report

Page 1

**NUCOR**  
P.O. Box 279  
Winton, NC 27986  
(252) 356-3700

Issuing Date : 10/16/2008  
Vehicle No : 7334  
Specification : 0.3750" x 96.000" x 120.000"  
ASTM A36-08/ASTM A709 Grade 50-70/ASME SA36-03a

Our Order No. : 217370  
Sold To : KENILWORTH STEEL  
106 EAST MARKET STREET  
WARREN, OH 44481

Cust. Order No. : 10-34891-JUN  
Ship To : Kenilworth Steel  
621 Dana  
WARREN, OH 44483

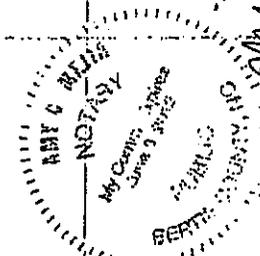
*A6384-6400E*  
*W. Cox*  
*AL 67806*

Marking :

Heat No	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	Alz	V	Nb	Ti	N	Ca	B	Sn	CEQ	PCM
8107869	0.17	0.82	0.016	0.003	0.11	0.27	0.07	0.10	0.02	0.007	0.005	0.003	0.002		0.0008	0.0001	0.011	0.35	0.24

### Tensile Test

Plate Serial No	Pieces	Tons	Dir.	Yield (psi)	(psi) Tensile	Elongation % in 2"		Elongation % in 8"		Dir.	Charpy Impacts			
						T	T	T	T		(ft-lbs) shear	(ft-lbs) shear	(ft-lbs) shear	Temp (°F) Avg.
8107869-08	15	9.18	T	45,800	71,000	25.8	25.8	H-L	76.9	63.0	60.6	66.8	40	15
8107869-09	22	13.47	T	43,600	68,200	24.6	24.6	H-L	76.9	63.0	60.6	86.8	40	15



*Amy C. Munn*  
*10/16/08*

NFCM, T1 and T2, 15ft-lbs @ +40 F (2DJ @ +4 C), H frequency.

Manufactured to fully killed practice by Electric Arc Furnace. Welding or weld repair was not performed on this material.

Mercury has not been used in the direct manufacturing of this material. Produced as continuous cast discrete plate as-rolled, unless otherwise noted in Specification.

Yield by 0.5EUL method unless otherwise specified.  $C_{eq} = C + (Mn/16) + ((Cr+Mo+V)/5) + ((Cu+Ni)/16)$

$P_{cm} = C + (Si/30) + (Mn/20) + (Cu/20) + (Ni/60) + (Cr/20) + (Mo/15) + (V/10) + (S/8)$

Melted and manufactured in the USA. ISO 9001-2000 certified (#12443-0) by SRI Quality System Registrar (#0986-09). PED 97/23/EC 772 Annex 1, Para. 4.3 Compliant.

DIN 50048 3.1/BEN 10204 3.1B(2004), DIN EN 10204 3.1(2006) compliant. For ABS grades only, Quality Assurance certificate 08-MMPQA-383

We hereby certify that the contents of this report are accurate and correct. All test results and operations performed by the material manufacturer are in compliance with the applicable specifications, including customer specifications.

*T.A. Deprellis*

10/16/2008 2:37:15 PM

T. A. Deprellis, Metallurgist

TEST CERTIFICATE

SHIP TO: ARCELORMITTAL PLATE LLC  
KENILWORTH STEEL CO  
621 DANA ST NE  
WARREN OH 44483

PAGE NO: 01 OF 02  
FILE NO: 4269-01-12  
MILL ORDER NO: 20004-005  
MELT NO: T1668  
DATE: 09/12/08

SOLD TO: KENILWORTH STEEL COMPANY  
106 EAST MARKET STREET  
SUITE 809  
WARREN OH 44481

SEND TO:

01-N

PLATE DIMENSIONS / DESCRIPTION

TOTAL QTY	GAUGE	WIDTH	LENGTH	DESCRIPTION	PIECE WEIGHT
3	2"	96"	240"	RECTANGLE	13068#

CUSTOMER INFORMATION

CUSTOMER PO: 09-34848

SPECIFICATION(S)

THIS MATERIAL HAS BEEN MANUFACTURED AND TESTED IN ACCORDANCE WITH PURCHASE ORDER REQUIREMENTS AND SPECIFICATION(S).

ASTM A709-GR36 YR 07  
IMPACTS WAIVED ASME SA36 ED 07 & ASTM A36 05  
MATERIAL PRODUCED UNDER A CERTIFIED QUALITY MGMT SYSTEM COMPLYING WITH ISO 9001 ABS-QE CERT. NO. 30130

CHEMICAL COMPOSITION

MELT	C	MN	P	S	CU	SI	NI	CR	MO
T1668	.18	1.03	.025	.014	.12	.20	.07	.08	.01
T1668	V	AL	CE						
	.004	.027	.001						

TENSILE PROPERTIES

LOC	DIR	YIELD STRENGTH PSI X 100	TENSILE STRENGTH PSI X 100	ELONGATION GAGE LGTH	%
BOT.	TRANS.	363	679	2.00"	32.0
BOT.	TRANS.	430	688	2.00"	28.0

GENERAL INFORMATION

ALL STEEL HAS BEEN MELTED AND MANUFACTURED IN THE U.S.A.  
MERCURY OR MERCURY COMPOUNDS ARE NOT USED IN THE  
MANUFACTURE OF ARCELORMITTAL PLATE LLC PRODUCTS.

AFFIRMED AND SUBSCRIBED BEFORE ME  
THIS 12th DAY OF SEPTEMBER 2008

\_\_\_\_\_  
NOTARY PUBLIC

NOTARIAL SEAL  
CAROL L. SLODY, NOTARY PUBLIC  
COATESVILLE, CHESTER CO., PA  
MY COMMISSION EXPIRES MAY 27, 2010

WE HEREBY CERTIFY THE ABOVE  
INFORMATION IS CORRECT:

QUALITY ASSURANCE LABORATORY  
COATESVILLE, PA 19320

*Elinore Zaplatny*  
SUPERVISOR - TEST REPORTING  
ELINORE ZAPLATNY

A4459E

A3465-3467E

UNUSUAL  
CONSIDERABLE  
B/L 6789D

NO. 1000

**CHARPY WORKSHEET**

Tensile Testing  
 Metallurgical Laboratory  
 Phn: 216.641.3290  
 Fax: 216.641.3291

JAB337-301

KENILWORTH STEEL  
 Attn: GREG REGALIA  
 Phn: 800-537-5283  
 Fax: 330-399-2144

12-35108

*Universal  
 Caps 16mm  
 BK 67810*

Spec	Size Temp	Ft_lbs	Lat. Exp	Shear	P/F
7/2A390E 01	Full +40 F	68			PASS
	AVG	93			
	AVG	25			
	AVG	62			
8/2A387E 01	Pull +40 F	57			PASS
	AVG	48			
	AVG	15			
	AVG	40			
8/2A439E 01	Pull +40 F	44			PASS
	AVG	76			
	AVG	52			
	AVG	57			
4/2A365E 01	Pull +40 F	40			PASS
	AVG	72			
	AVG	75			
	AVG	62			
5/2A631E 01	Pull +40 F	72			PASS
	AVG	54			
	AVG	53			
	AVG	60			

The above results are preliminary for information purposes only. Certification Report must be mailed.

1-864

1-714 P.01

1-330-399-9184

FROM:KENILWORTH STEEL INC

DEC 08 '08 09:08:59



196 Bell Avenue  
CARNEGIE, PA 15106

---

**CERTIFICATION OF MATERIAL**

**CUSTOMER:** UNION METAL CORP  
1432 MAPLE AVE NE  
CANTON, STARK  
OH 44705-1720

**SALES ORDER NUMBER:** 10779717 000010  
**CUSTOMER PURCHASE ORDER:** 13707  
**CUSTOMER PART NUMBER:**  
**DELIVERY NUMBER:** 81145248 000010

**MATERIAL NUMBER:** 160000004  
**INVENTORY DESCRIPTION:** ANG A36 .75 X .75 X .125 X 240

**FINISHED ITEM DESCRIPTION:** CARB ANG A36  
0.75" X 0.75" X 0.125" X 240"

**HEAT NUMBER(S)**                      **SLAB/COIL/TEST NUMBER (if applicable)**  
N540863

**CERTIFICATION**

A survey of our material sources has indicated that neither mercury nor radioactive substances is introduced into their products, or is used in any of their processes. While we make no independent tests for mercury or radiation, there is nothing in Ryerson's system which could be expected to introduce contamination of either type.

This document certifies that the material described above was shipped in accordance with your order. The producer of the material has certified to Ryerson that it was produced in accordance with the following spec:

ASTM A36      ASME SA36

---

Authorized Agent of Ryerson

11/09/2007

010104



CAMBRIDGE STEEL MILL  
160 ORION PLACE  
CAMBRIDGE ON N1T 1R9 CAN  
(519) 740-2488

Chemical and Physical Test Report  
MADE IN CANADA

005837

SHIP TO RYERSON TULL 5 CLINTON STREET 314-231-1020 ST LOUIS, MO 63102	INVOICE TO RYERSON TULL PROCUREMENT/CHIC P.O. BOX 8000 A CHICAGO, IL 60680	SHIP DATE 07/21/05	CUST. ACCOUNT NO 40000093
---	---	-----------------------	------------------------------

SHAPE & SIZE	GRADE	SPECIFICATION	SALES ORDER	CUST P.O. NUMBER
A3/4 X 3/4 X 1/8	A36	ASTM A36/A36M-04; CSA-G40.21-300W-98(44W)	5048032-01	3A6642

HEAT I.D.	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Nb	Sn
N540863	.12	.60	.008	.038	.17	.45	.11	.16	.096	.005	.003	.014

Mechanical Test: Yield 53613 PSI, 369.65 MPA Tensile: 73388 PSI, 505.99 MPA %EI: 24.0/8in, 24.0/200MM  
 THIS GRADE ALSO MEETS ASME SA36-01 SPECIFICATION  
 Mechanical Test: Yield 53333 PSI, 367.72 MPA Tensile: 74399 PSI, 512.96 MPA %EI: 24.5/8in, 24.5/200MM  
 THIS GRADE ALSO MEETS ASME SA36-01 SPECIFICATION  
 CUST ITEM NUMBER: J0104

SHAPE & SIZE	GRADE	SPECIFICATION	SALES ORDER	CUST P.O. NUMBER
C2 X 1 X 1/8	A36	ASTM A36/A36M-04; CSA-G40.21-300W-98(44W)	5023635-01	3A6310

HEAT I.D.	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Nb	Sn
N541524	.15	.58	.013	.040	.23	.31	.12	.14	.055	.005	.003	.012

Mechanical Test: Yield 53587 PSI, 369.47 MPA Tensile: 74973 PSI, 516.92 MPA %EI: 27.0/8in, 27.0/200MM  
 THIS GRADE ALSO MEETS ASME SA36-01 SPECIFICATION  
 Mechanical Test: Yield 53609 PSI, 369.62 MPA Tensile: 73176 PSI, 504.53 MPA %EI: 21.0/8in, 21.0/200MM  
 THIS GRADE ALSO MEETS ASME SA36-01 SPECIFICATION  
 CUST ITEM NUMBER: 010542

JOSEPH T. RYERSON & COMPANY  
RECEIVING DEPARTMENT

JUL 25 2005

SUBJECT TO INSPECTION

Customer Notes  
A36: ASTM A36-00A & A709-00A ASME-SA36-97A  
This material, including the billets, was produced and manufactured in Canada.

*A.J. Turner*  
A.J. Turner  
Quality Assurance Manager  
MBI Group

*Eric Hand*

Mgr. Metallurg. Svcs.  
CAMBRIDGE STEEL MILL

THE ABOVE FIGURES ARE CERTIFIED EXTRACTS FROM THE ORIGINAL CHEMICAL AND PHYSICAL TEST RECORDS AS CONTAINED IN THE PERMANENT RECORDS OF COMPANY.

SOLO YOUNGSTOWN PIPE & SUPPLY INC  
 TO: 4100 LAKE PARK RD  
 PO BOX 3467  
 YOUNGSTOWN, OH 44513-0000

SHIP YOUNGSTOWN PIPE  
 TO: 219 PHELPS ST  
 YOUNGSTOWN, OH 44512-0000

**NUCOR**  
 BAR MILL GROUP  
 NUCOR STEEL AUBURN, INC.

Ship from:

Nucor Steel - Auburn  
 25 Quarry Road  
 Auburn, NY 13021  
 315-253-4561

**CERTIFIED MILL TEST REPORT**

Date: 25-Aug-2008  
 B.L. Number: 352509  
 Load Number: 102519

Material Safety Data Sheets are available at [www.nucorbar.com](http://www.nucorbar.com) or by contacting your inside sales representative.

HEAT NUM. *	DESCRIPTION	PHYSICAL TESTS				CHEMICAL TESTS														
		YIELD P.S.I.	TENSILE P.S.I.	ELONGS % IN 8"	BEND	WT%	DEF	C	NE	Mn	Cr	P	Mo	S	V	Si	Ob	Cu	Sn	C.E.
PO# => E4974	83141 Nucor Steel - Auburn Inc	53,200	73,300	23.8%					.17		.76	.014	.040	.040	.18	.31				.35
E4974	1/4x1" FL 20" A36/44W	367MPa	505MPa	25.0%					.08		.11	.026	0.00	0.00	.002					
	CSA G40.21-98 44W/ASTM A36/A36M- ASTM A709/A709M-07 GR 36 ASME SA36-2007 EDITION ASTM A36/A36M-05	54,600	73,600	25.0%																

MSMG-06 May 16, 2008

YOUNGSTOWN PIPE & SUPPLY INC.  
 10000 N. STATE ST. YOUNGSTOWN, OH 44512-1700  
 FAX (330) 783-2700  
 THESE TESTS REPRESENT SUPPLY ENTIRETY  
 SOLD TO: [Signature]  
 YOUR P.O. # [Signature]  
 YSSES O.E.M. # [Signature]  
 SIGNATURE BY: [Signature]

I HEREBY CERTIFY THAT THE ABOVE FIGURES ARE CORRECT AS CONTAINED IN THE RECORDS OF THE CORPORATION  
 ALL MANUFACTURING PROCESSES OF THE STEEL MATERIALS IN THIS PRODUCT INCLUDING  
 MELTING HAVE OCCURRED WITHIN THE UNITED STATES. ALL PRODUCTS PRODUCED ARE WELD FREE  
 UNLESS OTHERWISE SPECIFIED BY THE CUSTOMER OR INDICATED OTHERWISE ON THE MARKING.

QUALITY  
 Jtm Biernal



Steel Dynamics - Roanoke Bar Division  
 P.O. Box 13948 Roanoke, VA 24038  
 Office: 540-342-1831 Fax: 540-342-9437

Test and Inspection

**YOUNGSTOWN PIPE & SUPPLY INC.**  
 PHONE # 330-783-2700  
 THESE TESTS REPORTS APPLY TO:  
 SOLD TO: UNION  
 YOUR PO. # 1785  
 YS&S O.M. # 57383  
 SIGNED BY WOMY

NO. 57743-1  
 ROANOKE

YOUNGSTOWN PIPE & SUPPLY INC  
 4100 LAKE PARK RD.  
 YOUNGSTOWN OH 44513-0000

Date 2/26/06

HEAT NUMBER	SIZE	1-YIELD PT. KSI	ULTIMATE KSI	ELONG 8 IN. TEST	BEND TEST	GRADE				
JG3269	FLATS 1/2 X 2 1/2	54.8	85.4	25.0		A529-50				
PURCHASE ORDER NUMBER		2-YIELD PT. KSI	ULTIMATE KSI	ELONG 8 IN. TEST	BEND TEST	GRADE				
80640 144 PIECES 20'		52.6	80.7	26.3		A529-50				
HEAT NUMBER	SIZE	1-YIELD PT. MPA	ULTIMATE MPA	ELONG 203mm TEST	BEND TEST	GRADE				
JG3269	FLATS 12.7 X 63.5	377.8	588.8	25.0		A529-50				
PURCHASE ORDER NUMBER		2-YIELD PT. MPA	ULTIMATE MPA	ELONG 203mm TEST	BEND TEST	GRADE				
80640 144 PIECES 20'		362.7	556.4	26.3		A529-50				
C	MN	S	P	SI	CR	NI	MO	CU	V	NB
.25	1.05	.025	.015	.24	.06	.12	.03	.26	.002	.002

MERCURY, RADIUM OR OTHER ALPHA SOURCE MATERIALS IN ANY FORM HAVE NOT BEEN USED IN THE PRODUCTION OF THIS MATERIAL. NO WELD REPAIR HAS BEEN PERFORMED.

Approved ABS QA Mill. Certificate No. 00NN10108-X.

This material was melted and manufactured in the USA by basic Electric Furnace processes to meet specification: ASTM A529-05 GRADE 50

The tensile values stated in either inch-pound units or SI units are to be regarded as separate as defined in the ASTM scope for this material. Unless a metric specification is ordered, this material has been tested and meets the requirements of the inch-pound ranges.

This is to certify the above to be a true and accurate report as contained in the records of this company.

Engineer of Tests: Charles R. Charlton

Tensile Testing  
 Metallurgical Laboratory  
 P. 1/1  
 Pbn: 216-641.3290  
 Fax: 216-641.3291

CHARPY WORKSHEET

YOUNGSTOWN PIPE & SUPPLY INC. JAB310-718  
 Attn: MIKE MONTELLER  
 Pbn: 330-744-2222  
 Fax: 330-744-8480

No. 1336  
 /8108248-01 2/3 +40 F  
 Size Temp ft\_lbs  
 59  
 47  
 Avg 54

SB 80022-M

/8107521 01 Full +40 F  
 Avg 54  
 64  
 20  
 73  
 52

PASS

/JG0565 01 2/3 +40 F  
 Avg 28  
 28  
 30  
 29

PASS

/JG3269 01 2/3 +40 F  
 Avg 21  
 21  
 22  
 21

PASS

/A61861 01 1/2 +40 F  
 Avg 58  
 62  
 63  
 61

PASS

/8108231 01 Full +40 F  
 Avg 6  
 44  
 6  
 19

FAIL

YOUNGSTOWN PIPE & SUPPLY INC.  
 THESE TESTS REPORTS APPLY TO:  
 ORDER# 3307832700  
 ORDER# 19185  
 ORDER# 57383  
 SOLD TO: UJA JLOU ALGZAC  
 YOUR P.O. #  
 ISSUED BY YP&S  
 ORDER#

Nov. 12. 2008 3:12PM

YP&S Plate Division



THE ABOVE RESULTS ARE PRELIMINARY FOR INFORMATION PURPOSES ONLY. CERTIFIED TEST REPORTS WILL BE MAILED.



196 Bell Avenue  
CARNEGIE, PA 15106

CERTIFICATION OF MATERIAL

UNION METAL CORP  
1432 MAPLE AVE NE  
CANTON, STARK  
OH 44705-1720

SALES ORDER NUMBER: 11112756 000030

CUSTOMER PURCHASE ORDER: 17447

CUSTOMER PART NUMBER:

DELIVERY NUMBER: 81673096 000020

MATERIAL NUMBER: 160000156

INVENTORY DESCRIPTION:

FINISHED ITEM DESCRIPTION: CARB Bar RD HR A36

0.625" X 240"

HEAT NUMBER (s) SLAB/COIL/TEST NUMBER (if applicable)

E2916

CERTIFICATION

A survey of our material sources has indicated that neither mercury nor radioactive substances is introduced into their products, or is used in any of their processes. While we make no independent tests for mercury or radiation, there is nothing in Ryerson's system which could be expected to introduce contamination of either type.

This document certifies that the material described above was shipped in accordance with your order. The producer of the material has certified to Ryerson that it was produced in accordance with the following spec:

ASTM A36  
ASME SA36

*John C. [Signature]*

Authorized Agent of Ryerson

07/21/2008

5-464205

480 pcs. = 9984

HEAT# E2916

DATE SHIPPED 6/11/2008

SHIPMENT# 0316836

SIZE: RD 5/8 20' 0"

ORDER ITEM# 202865/ 01

SOLD TO: RYERSON TULL-EAST

FAX#EMAIL: 4122766664

**NUCOR**  
 BAR MILL - AUBURN  
 NUCOR STEEL AUBURN, INC.

P.O. BOX 2008  
 QUARRY ROAD  
 AUBURN, NY 13021

CUST. P.O. 4500206939

PART #: 160000156

GRADE: ASTM A36-05/CSA 44W

SPEC A709-06A GR36

SUPP. REQ:  
 SHIP TO: RYERSON - PITT

CERTIFIED TEST REPORT

CHEMICAL ANALYSIS %

C	MN	SI	P	S	CU	NI	CR	MO	SN	V	CB	TI	B	N2	O2
150	750	190	014	039	370	0900	140	025	015	000	0020	0010	0002	XXX	XXX

MECHANICAL RESULTS

YIELD	TENSILE	GAUGE	% ELONG	BEND	PN. DIA	% R.A.
K.S.I.	K.S.I.	LENGTH				
51.50	71.70	8	25.0	.0		.0
52.00	72.90	8	26.2	.0		.0
MPa	MPa	GAUGE	%	BEND	PN. DIA	R.A.
		LENGTH	ELONG			

CHARPY IMPACT TEST

TEMP. F	FT./LB.	SUBSIZE SPECIMEN	SAMPLE

I CERTIFY THESE RESULTS TO BE CORRECT AS CONTAINED IN THE RECORDS OF THE COMPANY.

JIM BIERNAT, METALLURGIST  
 STATE OF NEW YORK SS.  
 COUNTY OF CAYUGA

Jim Biernat

(print)

AFTER BEING DULY SWORN BY ME, I DECLARE THAT THESE RESULTS ARE CORRECT AS CONTAINED IN THE RECORDS OF NUCOR STEEL AUBURN, INC

*James M. Biernat*  
 (sign)

SUBSCRIBED AND SHOWN BEFORE ME

Grain Size: XXX  
 Reduction Ratio: XXX  
 As Rolled Hardness: XXX  
 D1: XXX  
 CE: 370  
 C1: XXX

JOMINY END-QUENCH HARDENABILITY RESULTS (HRC)

J1	J2	J3	J4	J5	J6	J7	J8	J9	J10	J11	J12

J13	J14	J15	J16	J18	J20	J22	J24	J26	J28	J30	J32

ALL MANUFACTURING PROCESSES FOR THIS STEEL, INCLUDING MELTING FROM SCRAP AND HOT ROLLING HAVE BEEN PERFORMED IN THE U.S.A. NO WELD REPAIR PERFORMED, STEEL NOT EXPOSED TO MERCURY OR ANY LIQUID ALLOY WHICH IS LIQUID AT AMBIENT TEMPERATURES.

CUSTOMER SPECIAL INSTRUCTIONS:

A36 CERTIFIED TO ASME SA36 1998 EDITION AND ASTM A709-97A GR.36 THIS WAS PRODUCED UNDER AUBURN QUALITY PROGRAM AUDITED 5/13/93 BY J.T. RYERSON CONFORMS TO JTR #0103-T-C-001 & 2150-U STRAND CAST FROM 5" BLT., SILICON KILLED, REDUCTION RATIO > 8/1

THIS \_\_\_\_\_ DAY OF \_\_\_\_\_

THIS CERTIFICATE IS NOTARIZED ONLY WHEN REQUESTED

BB/00625  
 155800

501668



TECHNICAL STAMPING, INC.

MATERIAL CERTIFICATION

50600 E. RUSSELL SCHMIDT BLVD.  
CHESTERFIELD TWP., MI 48051  
PH(586)948-2285 / FX(586)948-3286

CUSTOMER NAME: Flexalloy Inc.      CUSTOMER ORDER NUMBER: P218096      DATE: 2/6/08

PART NUMBER: 1-1/4" F436 Hdg      CUSTOMER LOT NO.: 125NWA30G      LOT NUMBER: 1207-813H      QUANTITY: 6,000

STEEL GRADE: 125NWA30G      HEAT: 1207-813H      SI: .037      AL: .047      REVISION: 6,000

SAE 1050      2141028      .54      .75      .009      .002      .037      .047      ASTM F-436-04

SPECIFICATION: ACTUAL GAUGE

O.D. - 2.469 - 2.531      CALIPER

I.D. - 1.375 - 1.438      CALIPER, PIN GAUGE

THICKNESS - .136 - .177      MICROMETER

PLAT - Max .010      CALIPER

HEAT TREAT - 38 - 45 HRC      40 - 43

PLATING - See Cert

OTHER - N/A

WE HERBY CERTIFY THIS PRODUCT WAS PRODUCED UNDER A ISO-9001:2000 QUALITY ASSURANCE SYSTEM. ISO-9001:2000 CERTIFICATION NUMBER-1265 - DATE OF REGIS. JAN. 3, 2003  
ALL MATERIALS ARE MADE AND MELTED IN THE U.S.A. THIS PRODUCT WAS MANUFACTURED IN CHESTERFIELD, MICHIGAN, U.S.A. THIS PRODUCT CONFORMS TO ALL REQUIREMENTS FOR WASHERS AS PRODUCED ACCORDING TO A.S.T.M. F-436-04. THE ABOVE TEST RESULTS APPLY ONLY TO THE ITEMS TESTED. THIS TEST REPORT MUST NOT BE REPRODUCED EXCEPT IN FULL WITHOUT PRIOR WRITTEN APPROVAL.

*[Handwritten Signature]*  
AUTHORIZED SIGNATURE

CERTIFIED ISO 9001:2000

**INDUSTRIAL STEEL TREATING COMPANY, INC**

501668

613 Carroll Street Jackson, MI 49202  
 P.O. Box 98 Jackson MI, 49204  
 Voice: 517-787-6312 Fax: 517-787-5441

**HEAT TREAT CERTIFICATION**

Customer

TECHNICAL STAMPING, INC.  
 Attn:  
 50600 E. RUSSELL SCHMIDT  
 CHESTERFIELD, MI 48051

Page: 1 of 1



Certification Date:

12/20/2007

**Order Details**

RESULTS		SPECIFICATIONS	
Blue Print Rev: 1279	Material Type: 1030 -1050	Packing Slip: 4444	Part Number: F0114
Quantity: 40,028	Material Type: 1030 -1050	Purchase Order:	
Net Weight: 5,404.0	Material Type: 1030 -1050	IST Order Number: 634940-1	
Part Desc: WASHER	Material Type: 1030 -1050	Lot Number: 1207-913	
Comments: 4 TUB #401, 712, 100, 523 1395, 1528, 1557, 1610, 1652 11117, 13026, 13377	Material Type: 1030 -1050	Heat Number:	

HRC 38 - 45

HRC 40 - 43

Approval:

*Tom Levy*

Tom Levy - Quality Assurance Supervisor

Contact

Tom Levy - Quality Assurance Supervisor  
 Voice: 517-780-9043 Fax: 517-787-5441  
 E-Mail: tolevy@indstl.com

This Certification cannot be reproduced except in full, without written authorization from Industrial Steel Treating Company, LLC.



501668

HOT DIP GALVANIZING



# ROGERS BROTHERS INC.

February 1, 2008

Technical Stamp  
50600 E. Russell Schmidt  
Chesterfield TWP, MI 48051

To Whom It May Concern:

This is to certify that the hot dip galvanizing of the following washers on your Purchase Order number 1522 conforms to specification ASTM A-153. The following sizes and lot numbers comply with the coating, workmanship, finish, and appearance requirements of ASTM F2329 specifications.

PIECES	PART# & SIZE	LOT NUMBER	AVERAGE ZINC COATING IN MILS.
267,768	RJ0058 5/8"	0108-842	3.31
23,767	RJ0100 1"	0108-845	5.13
55,463	R0058 5/8"	1106-425	4.55
105,726	R0078 7/8"	1207-834	3.44
50,368	R0078 7/8"	1207-816	3.05
31,132	R0114 1-1/4"	1207-813	2.95

This certification in no way implies anything other than the quality of our hot dip galvanizing as it pertains to your order.

Yours very truly,

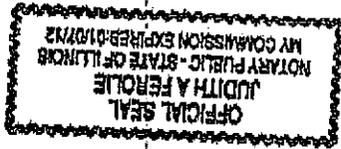
ROGERS BROTHERS INC.

*Deanne P. Stillburne*

Lorraine P. Shelburne  
Vice President

SUBSCRIBED AND SWORN  
BEFORE ME THIS 1ST  
DAY OF JANUARY 2008, AD

*Judith A. Ferolle*  
NOTARY PUBLIC



WE HEREBY CERTIFY THIS PRODUCT WAS PRODUCED UNDER A ISO-9001:2000 QUALITY ASSURANCE SYSTEM, ISO-9001:2000 CERTIFICATION NUMBER-1265 - DATE OF REGIS. JAN. 9, 2003  
 ALL MATERIALS ARE MADE AND MELTED IN THE U.S.A. THIS PRODUCT WAS MANUFACTURED IN CHESTERFIELD, MICHIGAN, U.S.A. THIS PRODUCT CONFORMS TO ALL REQUIREMENTS  
 FOR WASHERS AS PRODUCED ACCORDING TO A.S.T.M. F-436-04. THE ABOVE TEST RESULTS APPLY ONLY TO THE ITEMS TESTED. THIS TEST REPORT MUST NOT BE REPRODUCED  
 EXCEPT IN FULL WITHOUT PRIOR WRITTEN APPROVAL

*[Handwritten Signature]*  
 AUTHORIZED SIGNATURE

CERTIFIED ISO 9001:2000

OTHER		N/A	
PLATING		See Cert	
HEAT TREAT	38 - 45 HRC	41 - 43	
FLAT	Max .010	.005	CALIPER
THICKNESS	.178 - .195	.190	MICROMETER
I.D.	2.125 - 2.188	2.154 - 2.157	CALIPER, PIN GAUGE
O.D.	3.688 - 3.812	3.729 - 3.732	CALIPER

SPECIFICATION		ACTUAL					GAUGE	
SAE 1050	2131928	.53	.79	.014	.003	.037	.057	ASTM F-436-04
STEEL GRADE	HEAT	C	MN	P	S	SI	AL	REVISION
2" F436 Hdg	200NWA30G				0508-023H		1,020	
PART NUMBER	CUSTOMER LOT NO.	LOT NUMBER		QUANTITY				
Flexalloy Inc.		P232929	8/13/08					
CUSTOMER NAME	CUSTOMER ORDER NUMBER	DATE						

**TECHNICAL STAMPING, INC.**  
 50600 E. RUSSELL SCHMIDT BLVD.  
 CHESTERFIELD TWP., MI 48051  
 PH(586)948-3285 / FX(586)948-3286

**TECHNICAL STAMPING**  
 EST. 1991  
 TSI

MATERIAL CERTIFICATION

502127

**INDUSTRIAL STEEL TREATING COMPANY, INC.**

613 Carroll Street Jackson, MI 49202  
 P.O. Box 98 Jackson MI, 49204  
 Voice: 517-787-6312 Fax: 517-787-5441

502127

**HEAT TREAT CERTIFICATION**

Certification Date:

05/07/2008

Page 1 of 1



Customer: TECHNICAL STAMPING, INC.  
 Attn: 50600 E. RUSSELL SCHMIDT  
 CHESTERFIELD, MI 48051

**Order Details**

Part Number	Packing Slip	Purchase Order	IST Order Number	Lot Number	Heat Number
F0200	4512		6944604	0508-023	2131928
Blue Print Rev:	Material Type:	Quantity:	Net Weight:	Part Desc:	Comments:
1279	1030-1050	3,496	1,346.0	WASHER	1 TUB #820 4319,4446,9039,2276,90012 92759

**SPECIFICATIONS**

HRC 38 - 45

HRC 41 - 43

Approval:

*Tom Levy*

Tom Levy - Quality Assurance Supervisor

Contact

Tom Levy - Quality Assurance Supervisor  
 Voice: 517-780-9043 Fax: 517-787-5441  
 E-Mail: tolevy@indstl.com

This Certification cannot be reproduced except in full, without written authorization from Industrial Steel Treating Company, LLC.

760602

\*\*\* M C I S T E L \*\*\*  
METALLOGICAL SERVICES INC.  
1040 PINE AVE. SE  
WARREN, OHIO 44483-6528

PAGE 1 OF 1

MELTED AND MANUFACTURED IN USA

C E R T I F I C A T E  
O F T E S T S

SOLD TO:  
SABRE STEEL INC  
23680 RESEARCH DR  
FARMINGTON HILLS MI 48335

SHIP TO:  
SABRE STEEL INC  
C/O VOSS STEEL  
7925 BEECH DALY AVE  
TAYLOR MI 48180

D. H. Emanuele  
President

I certify that the properties of the items tested are true and accurate. Material was sampled, tested and inspected in accordance with the methods prescribed in the governing specifications. Subject material also conforms to the requirements of the governing specifications. This report shall not be reproduced except in full.

All tests are conducted in-house unless noted with an asterisk.

Item Specification and Description  
03:15:28

HR SHEET HI-CARBON SAE-1050 AK FG  
SPECIFIED HARDNESS NON-TEMPER ROLLED  
REST THICK RESS CHEM T/R  
1.89M P10M00C X 39.000 ME X COILS  
COIL WGT 30000MN/39000MX

COIL NUMBERS

HEAT-NO 2131928	HEAT-NO 2142175	HEAT-NO 2131928	HEAT-NO 2142175
C186101	C186101	C186401	C186401
MN .53	MN .51	MN .79	MN .79
CA .01	CA .01	CA .01	CA .01
CE .0018	CE .0018	CE .0018	CE .0018
CB .0000	CB .0000	CB .0000	CB .0000
CU .0000	CU .0000	CU .0000	CU .0000
SI .037	SI .037	SI .037	SI .037
AL .000	AL .000	AL .000	AL .000
V .003	V .003	V .003	V .003
H .000	H .000	H .000	H .000
S .003	S .003	S .003	S .003
P .014	P .014	P .014	P .014
SB .057	SB .057	SB .057	SB .057
AT .007	AT .007	AT .007	AT .007
SN .004	SN .004	SN .004	SN .004
NO .007	NO .007	NO .007	NO .007
CA .049	CA .049	CA .049	CA .049
CE .005	CE .005	CE .005	CE .005
CB .001	CB .001	CB .001	CB .001
CU .0001	CU .0001	CU .0001	CU .0001
SI .0001	SI .0001	SI .0001	SI .0001
AL .0001	AL .0001	AL .0001	AL .0001
V .0001	V .0001	V .0001	V .0001
H .0001	H .0001	H .0001	H .0001
S .0001	S .0001	S .0001	S .0001
P .0001	P .0001	P .0001	P .0001
SB .0001	SB .0001	SB .0001	SB .0001
AT .0001	AT .0001	AT .0001	AT .0001
SN .0001	SN .0001	SN .0001	SN .0001
NO .0001	NO .0001	NO .0001	NO .0001
CA .0001	CA .0001	CA .0001	CA .0001
CE .0001	CE .0001	CE .0001	CE .0001
CB .0001	CB .0001	CB .0001	CB .0001
CU .0001	CU .0001	CU .0001	CU .0001
SI .0001	SI .0001	SI .0001	SI .0001
AL .0001	AL .0001	AL .0001	AL .0001
V .0001	V .0001	V .0001	V .0001
H .0001	H .0001	H .0001	H .0001
S .0001	S .0001	S .0001	S .0001
P .0001	P .0001	P .0001	P .0001
SB .0001	SB .0001	SB .0001	SB .0001
AT .0001	AT .0001	AT .0001	AT .0001
SN .0001	SN .0001	SN .0001	SN .0001
NO .0001	NO .0001	NO .0001	NO .0001
CA .0001	CA .0001	CA .0001	CA .0001
CE .0001	CE .0001	CE .0001	CE .0001
CB .0001	CB .0001	CB .0001	CB .0001
CU .0001	CU .0001	CU .0001	CU .0001
SI .0001	SI .0001	SI .0001	SI .0001
AL .0001	AL .0001	AL .0001	AL .0001
V .0001	V .0001	V .0001	V .0001
H .0001	H .0001	H .0001	H .0001
S .0001	S .0001	S .0001	S .0001
P .0001	P .0001	P .0001	P .0001
SB .0001	SB .0001	SB .0001	SB .0001
AT .0001	AT .0001	AT .0001	AT .0001
SN .0001	SN .0001	SN .0001	SN .0001
NO .0001	NO .0001	NO .0001	NO .0001
CA .0001	CA .0001	CA .0001	CA .0001
CE .0001	CE .0001	CE .0001	CE .0001
CB .0001	CB .0001	CB .0001	CB .0001
CU .0001	CU .0001	CU .0001	CU .0001
SI .0001	SI .0001	SI .0001	SI .0001
AL .0001	AL .0001	AL .0001	AL .0001
V .0001	V .0001	V .0001	V .0001
H .0001	H .0001	H .0001	H .0001
S .0001	S .0001	S .0001	S .0001
P .0001	P .0001	P .0001	P .0001
SB .0001	SB .0001	SB .0001	SB .0001
AT .0001	AT .0001	AT .0001	AT .0001
SN .0001	SN .0001	SN .0001	SN .0001
NO .0001	NO .0001	NO .0001	NO .0001
CA .0001	CA .0001	CA .0001	CA .0001
CE .0001	CE .0001	CE .0001	CE .0001
CB .0001	CB .0001	CB .0001	CB .0001
CU .0001	CU .0001	CU .0001	CU .0001
SI .0001	SI .0001	SI .0001	SI .0001
AL .0001	AL .0001	AL .0001	AL .0001
V .0001	V .0001	V .0001	V .0001
H .0001	H .0001	H .0001	H .0001
S .0001	S .0001	S .0001	S .0001
P .0001	P .0001	P .0001	P .0001
SB .0001	SB .0001	SB .0001	SB .0001
AT .0001	AT .0001	AT .0001	AT .0001
SN .0001	SN .0001	SN .0001	SN .0001
NO .0001	NO .0001	NO .0001	NO .0001
CA .0001	CA .0001	CA .0001	CA .0001
CE .0001	CE .0001	CE .0001	CE .0001
CB .0001	CB .0001	CB .0001	CB .0001
CU .0001	CU .0001	CU .0001	CU .0001
SI .0001	SI .0001	SI .0001	SI .0001
AL .0001	AL .0001	AL .0001	AL .0001
V .0001	V .0001	V .0001	V .0001
H .0001	H .0001	H .0001	H .0001
S .0001	S .0001	S .0001	S .0001
P .0001	P .0001	P .0001	P .0001
SB .0001	SB .0001	SB .0001	SB .0001
AT .0001	AT .0001	AT .0001	AT .0001
SN .0001	SN .0001	SN .0001	SN .0001
NO .0001	NO .0001	NO .0001	NO .0001
CA .0001	CA .0001	CA .0001	CA .0001
CE .0001	CE .0001	CE .0001	CE .0001
CB .0001	CB .0001	CB .0001	CB .0001
CU .0001	CU .0001	CU .0001	CU .0001
SI .0001	SI .0001	SI .0001	SI .0001
AL .0001	AL .0001	AL .0001	AL .0001
V .0001	V .0001	V .0001	V .0001
H .0001	H .0001	H .0001	H .0001
S .0001	S .0001	S .0001	S .0001
P .0001	P .0001	P .0001	P .0001
SB .0001	SB .0001	SB .0001	SB .0001
AT .0001	AT .0001	AT .0001	AT .0001
SN .0001	SN .0001	SN .0001	SN .0001
NO .0001	NO .0001	NO .0001	NO .0001
CA .0001	CA .0001	CA .0001	CA .0001
CE .0001	CE .0001	CE .0001	CE .0001
CB .0001	CB .0001	CB .0001	CB .0001
CU .0001	CU .0001	CU .0001	CU .0001
SI .0001	SI .0001	SI .0001	SI .0001
AL .0001	AL .0001	AL .0001	AL .0001
V .0001	V .0001	V .0001	V .0001
H .0001	H .0001	H .0001	H .0001
S .0001	S .0001	S .0001	S .0001
P .0001	P .0001	P .0001	P .0001
SB .0001	SB .0001	SB .0001	SB .0001
AT .0001	AT .0001	AT .0001	AT .0001
SN .0001	SN .0001	SN .0001	SN .0001
NO .0001	NO .0001	NO .0001	NO .0001
CA .0001	CA .0001	CA .0001	CA .0001
CE .0001	CE .0001	CE .0001	CE .0001
CB .0001	CB .0001	CB .0001	CB .0001
CU .0001	CU .0001	CU .0001	CU .0001
SI .0001	SI .0001	SI .0001	SI .0001
AL .0001	AL .0001	AL .0001	AL .0001
V .0001	V .0001	V .0001	V .0001
H .0001	H .0001	H .0001	H .0001
S .0001	S .0001	S .0001	S .0001
P .0001	P .0001	P .0001	P .0001
SB .0001	SB .0001	SB .0001	SB .0001
AT .0001	AT .0001	AT .0001	AT .0001
SN .0001	SN .0001	SN .0001	SN .0001
NO .0001	NO .0001	NO .0001	NO .0001
CA .0001	CA .0001	CA .0001	CA .0001
CE .0001	CE .0001	CE .0001	CE .0001
CB .0001	CB .0001	CB .0001	CB .0001
CU .0001	CU .0001	CU .0001	CU .0001
SI .0001	SI .0001	SI .0001	SI .0001
AL .0001	AL .0001	AL .0001	AL .0001
V .0001	V .0001	V .0001	V .0001
H .0001	H .0001	H .0001	H .0001
S .0001	S .0001	S .0001	S .0001
P .0001	P .0001	P .0001	P .0001
SB .0001	SB .0001	SB .0001	SB .0001
AT .0001	AT .0001	AT .0001	AT .0001
SN .0001	SN .0001	SN .0001	SN .0001
NO .0001	NO .0001	NO .0001	NO .0001
CA .0001	CA .0001	CA .0001	CA .0001
CE .0001	CE .0001	CE .0001	CE .0001
CB .0001	CB .0001	CB .0001	CB .0001
CU .0001	CU .0001	CU .0001	CU .0001
SI .0001	SI .0001	SI .0001	SI .0001
AL .0001	AL .0001	AL .0001	AL .0001
V .0001	V .0001	V .0001	V .0001
H .0001	H .0001	H .0001	H .0001
S .0001	S .0001	S .0001	S .0001
P .0001	P .0001	P .0001	P .0001
SB .0001	SB .0001	SB .0001	SB .0001
AT .0001	AT .0001	AT .0001	AT .0001
SN .0001	SN .0001	SN .0001	SN .0001
NO .0001	NO .0001	NO .0001	NO .0001
CA .0001	CA .0001	CA .0001	CA .0001
CE .0001	CE .0001	CE .0001	CE .0001
CB .0001	CB .0001	CB .0001	CB .0001
CU .0001	CU .0001	CU .0001	CU .0001
SI .0001	SI .0001	SI .0001	SI .0001
AL .0001	AL .0001	AL .0001	AL .0001
V .0001	V .0001	V .0001	V .0001
H .0001	H .0001	H .0001	H .0001
S .0001	S .0001	S .0001	S .0001
P .0001	P .0001	P .0001	P .0001
SB .0001	SB .0001	SB .0001	SB .0001
AT .0001	AT .0001	AT .0001	AT .0001
SN .0001	SN .0001	SN .0001	SN .0001
NO .0001	NO .0001	NO .0001	NO .0001
CA .0001	CA .0001	CA .0001	CA .0001
CE .0001	CE .0001	CE .0001	CE .0001
CB .0001	CB .0001	CB .0001	CB .0001
CU .0001	CU .0001	CU .0001	CU .0001
SI .0001	SI .0001	SI .0001	SI .0001
AL .0001	AL .0001	AL .0001	AL .0001
V .0001	V .0001	V .0001	V .0001
H .0001	H .0001	H .0001	H .0001
S .0001	S .0001	S .0001	S .0001
P .0001	P .0001	P .0001	P .0001
SB .0001	SB .0001	SB .0001	SB .0001
AT .0001	AT .0001	AT .0001	AT .0001
SN .0001	SN .0001	SN .0001	SN .0001
NO .0001	NO .0001	NO .0001	NO .0001
CA .0001	CA .0001	CA .0001	CA .0001
CE .0001	CE .0001	CE .0001	CE .0001
CB .0001	CB .0001	CB .0001	CB .0001
CU .0001	CU .0001	CU .0001	CU .0001
SI .0001	SI .0001	SI .0001	SI .0001
AL .0001	AL .0001	AL .0001	AL .0001
V .0001	V .0001	V .0001	V .0001
H .0001	H .0001	H .0001	H .0001
S .0001	S .0001	S .0001	S .0001
P .0001	P .0001	P .0001	P .0001
SB .0001	SB .0001	SB .0001	SB .0001
AT .0001	AT .0001	AT .0001	AT .0001
SN .0001	SN .0001	SN .0001	SN .0001
NO .0001	NO .0001	NO .0001	NO .0001
CA .0001	CA .0001	CA .0001	CA .0001
CE .0001	CE .0001	CE .0001	CE .0001
CB .0001	CB		

502127

HOT DIP GALVANIZING



ROGERS BROTHERS INC.

July 18, 2008

Technical Stamping  
50600 E. Russell Schmidt  
Chesterfield TWP, MI 48051

To Whom It May Concern:

This is to certify that the hot dip galvanizing of the following washers on your Purchase Order number 1529 conforms to specification ASTM A-153. The following sizes and lot numbers comply with the coating, workmanship, finish, and appearance requirements of ASTM F2329 specifications.

PIECES	PART# & SIZE	LOT NUMBER	AVERAGE ZINC COATING IN MILS.
39,272	BBW-S00 1-3/4"	0108-868	3.92
257,500	F0012 1/2"	0508-029	3.33
52,750	F0012 1/2"	0508-027	3.28
45,250	F0058 5/8"	0508-061	3.46
79,600	F0100 1"	0408-009	3.47
12,480	F0134 1-3/4"	0508-048	2.99
5,400	F0200 2"	0508-023	3.96
6,715	F0112 1-1/2"	0408-008	2.95
47,375	F0078 7/8"	0608-083	3.28
65,875	F0034 3/4"	0508-068	3.52

This certification in no way implies anything other than the quality of our hot dip galvanizing as it pertains to your order.

Yours very truly,

ROGERS BROTHERS INC.

*Lorraine P. Shelburne*

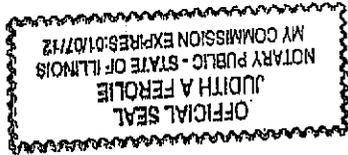
Lorraine P. Shelburne  
Vice President

LPS:dl

SUBSCRIBED AND SWORN  
BEFORE ME THIS 18TH  
DAY OF JULY 2008, AD

*Judith A Ferolie*

NOTARY PUBLIC



# INSPECTION CERTIFICATE

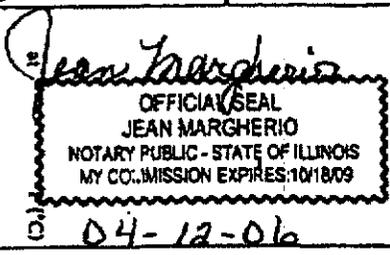
Customer	Specification	Size	Lot No.	Date
DALLAS FASTENER, INC. 1041 AVENUE M GRAND PRAIRIE, TEXAS 75040	ASTM A-306 GRADE DH HEAVY HEX NUT	H.D.G. 5/8-11 UNC 0.020" BLUE DYE	ACB21	Apr. 12, '06

Mechanical properties listed in accordance to ASTM F606/F606M, ASTM A370, ASTM F18

  
**UNYTITE, INC.**  
 One Unytille Drive  
 Peru, Illinois 61354  
 815-224-2221 — FAX# 815-224-3434

Mill Maker		Material Size	Heat No.	Chemical Composition											
				Spec.		C	SI	MIN.	P	S	CU	NI	Cr	MO	
REP	CARBON	STEEL	501412	0.21	0.23	0.70	0.011	0.009	0.01	0.02	1.00	0.18	-	-	-

Item	Proof Load	Cone Snubbing	Hardness	Hardness	Absorbed Energy	Heat Treatment	Shape & Dimension	
							Inspection	ANSI B18.2.2
Spec.	33,900	-	24-38	HAB • HB	1 • kgm • ft/ft	T: MIN. 800° F	Inspection	GOOD
Results	n	n	.HRC			Q: FORGING Q (W.Q.)	Inspection	GOOD
Results	5	-	27.5 27.4 27.8 29.0 29.0 28.1			T: 1004° F/45M. (W.C.)	Inspection	GOOD
Results	GOOD	-		Hardness Treatment		Q: Quenching T: Tempering ST: Solution Treatment	Inspection	GOOD

  
 OFFICIAL SEAL  
 JEAN MARGHERIO  
 NOTARY PUBLIC - STATE OF ILLINOIS  
 MY COMMISSION EXPIRES: 10/18/09  
 04-12-06

" DH 0"  
 Production Quantity  
 22,750 pcs.

Chief of Quality Assurance Section

Material used for the nut was melted and manufactured in the USA. The nut was manufactured in the USA to the above specification.  
 We hereby certify that the material described has been manufactured and inspected satisfactorily with the requirement of the above specification.

UMC # 501418

*Handwritten signature*

UNSCOD Rev A 2/1/99  
This Report May Not Be Reproduced Except in Full

It is certified that the product described herein was manufactured, sampled, tested and/or inspected in accordance with the specifications and quality requirements in such respect. The results of the report are limited only to the items described herein and are covered under the scope of accreditation. Further, the product described herein was manufactured by a recognized testing laboratory and was not certified by the manufacturer. Republic Technology International Inc. is not responsible for the product and its performance and management in the USA. Prepared by the office of: James C. Cook, Director, Quality Assurance, Republic Technology International Inc. (Date: 08/23/99)

Microcleanliness determined by methods defined in ASTM E45-97 Method A

AT	1.7	=
AH	0.0	=
BT	0.7	=
BH	0.0	=
CT	0.0	=
CH	0.0	=
DT	0.5	=
DH	0.0	=

**END QUENCH HARDENABILITY TEST RESULTS \***  
 Austenitic Grain Size 5 or Finer Based on Total Aluminum equal to or greater than 0.020% per ASTM A29-93a.  
 Car Test  
 Austenize Temperature 1700 degs. F

**DI VALUE**  
 2.13 (Calculation utilizes 3 significant decimals for each element)



JK CLEANLINESS - AVG RESULTS \*

Jointly hardenability determined by methods defined in ASTM A225-96

1.0M	1.1
1.2	1.2
1.3	1.3
1.4	1.4
1.5	1.5
1.6	1.6
1.7	1.7
1.8	1.8
1.9	1.9
2.0	2.0
2.1	2.1
2.2	2.2
2.3	2.3
2.4	2.4
2.5	2.5
2.6	2.6
2.7	2.7
2.8	2.8
2.9	2.9
3.0	3.0
3.1	3.1
3.2	3.2
3.3	3.3
3.4	3.4
3.5	3.5
3.6	3.6
3.7	3.7
3.8	3.8
3.9	3.9
4.0	4.0
4.1	4.1
4.2	4.2
4.3	4.3
4.4	4.4
4.5	4.5
4.6	4.6
4.7	4.7
4.8	4.8
4.9	4.9
5.0	5.0

**HEAT CHEMISTRY ANALYSIS**  
 Type: Bloom cast  
 Remark: UOM

Element	Remark
C	0.21
Mn	0.70
P	0.011
S	0.009
Si	0.23
Cr	0.010
Ni	0.02
Mo	0.179
Co	0.001
Al	0.035
V	0.005
Ca	0.001
Fe	1.00
As	0.001
Sn	0.001
Al	0.035
V	0.005
Ca	0.001

C.S.N. Determined by methods defined in ASTM E210-94.  
 Fe and Si Determined by methods defined in ASTM E210-94.  
 All other elements determined by methods defined in ASTM E210-94.

**MATERIAL INFORMATION**  
 Item No. 000001  
 Material Description 0015213 0.8557

Heat 501412

Specification  
 (BC) C.18/23 H9N.60V.85 P.030 MAX S.030 MAX SI.15/35 CU.30 MAX NI.25 MAX CR.90/1.20 NO.15/.30 FINB  
 GRAIN COLD WORKING QUALITY PEEL & BURNISH REPORT JOINDY CLEANLINESS TENSILE FOR INFO  
 4120 Customer Information

Mail To: 242038900  
 UNYTTTE INC  
 ATTN: JEFF DINELLI  
 ONE UNYTTTE DRIVE  
 PERULI, 61364-9710

Sold To: 242038000  
 UNYTTTE INC  
 ONE UNYTTTE DRIVE  
 PERULI, IL, 61364-9710  
 Ship To: 242038001  
 UNYTTTE INC  
 ONE UNYTTTE DRIVE  
 PERULI, IL, 61364-9710

Sales Order No.: 8116559	Delivery No. (BOL):	Vehicle ID(Center):	Purchase Order No.: 20421	P.O. Date: 12/28/1999
--------------------------	---------------------	---------------------	---------------------------	-----------------------

**METALLURGICAL TEST REPORT**

UWC# 501418

REPUBLIC TECHNOLOGIES  
 INTERNATIONAL  
 LOHAIN HOT ROLLED BAR PLANT  
 1807 E 28th Street  
 Larch, OH 44085

REPUBLIC TECHNOLOGIES  
 INTERNATIONAL, LOHAIN HOT  
 ROLLED BAR PLANT IS  
 OS-8000 REGISTERED

P.02/04

SPR 18 2000 07:38 FR TECH CNTR COPY ROOM 440 277 2844 TO UNYTTTE

In the Field of  
 Chemical Testing  
 Only Certified  
 ISO 9001  
 Number 11, 2001



REPUBLIC TECHNOLOGIES  
INTERNATIONAL  
LORAIN HOT ROLLED BAR  
PLANT

REPUBLIC TECHNOLOGIES  
INTERNATIONAL, LORAIN HOT  
ROLLED BAR PLANT IS  
OS-9000 REGISTERED



UMC# 501418

Sales Order No.: 8116459	Delivery No. (BOL):	Vehicle ID(Carrier):	Purchase Order No.: 20421	P.O. Date: 12/28/1999
-----------------------------	---------------------	----------------------	------------------------------	--------------------------

**AS ROLLED TENSILE \***

Type	Min	Max	Avg. Uom
Tensile Strength	103500	103500	103500 PSI
Elongation in 2"	27.0	27.0	27.0 %
Elongation in 8"	12.0	12.0	12.0 %
Reduction of Area	46.2	46.2	46.0 %

Mechanical properties determined by methods defined in ASTM E8-99 and ASTM A370-97a.

**REDUCTION RATIO**

277.23:1 Bloom Cast

This is to certify that the product described herein was manufactured, sampled, tested and/or inspected in accordance with the specifications and quality requirements in each respect. The results in this report are applicable only to the items described herein and are correct as contained in the records of the company. Results indicated with an asterisk (\*) are not covered under the scope of accreditation. Results indicated by two asterisks (\*\*) were performed by a non-accredited third party laboratory and are not certified by Republic Technologies International. Republic Technologies International certifies that this product was tested and manufactured in the USA.

Prepared by the office of: James C. Cash, Director, Quality Assurance Hot Rolled Bar Division, dated: 04/06/2000

This Report May Not Be Reproduced Except in Full  
UQ5020 Rev A 2/1/99

*James C. Cash*

Universal Galvanizing, Inc.  
107 Didion Drive  
St. Peters, Missouri 63376  
(636) 970-2272

UMC # 501418

CERTIFICATE OF COMPLIANCE  
FOR HOT DIP GALVANIZING

CUSTOMER : Unytite, Inc.  
DATE : April 03, 2006  
ORDER NO : 35757  
LOT NO. : AC821  
ITEM : A563 DH HHN Nut  
SIZE : 5/8-11 0.031

WE HEREBY CERTIFY THAT THE ABOVE SIZE AND LOT  
NUMBER WHICH WAS HOT DIP GALVANIZED IN OUR PLANT  
MEET THE SPECIFICATIONS OF ASTM-A153 CLASS C.

AVERAGE THICKNESS OF ZINC COATING : 4.3 MILS

*David Gehris*  
David Gehris, QUALITY CONTROL

- Specializing in Hot Dip Galvanizing -

# INSPECTION CERTIFICATE

Customer	Specification ASTM A-303	Lot No:	Date
	GRADE DH HEAVY HEX NUT	KT041	Sep. 26, '07
	Size 1-1/4-7 UNC 0.024" BLUE H/E		


**UNYTITE, INC.**  
 One Unytite Drive  
 Peru, Illinois 61354  
 815-224-2221 — FAX# 815-224-3434

Mechanical properties tested in accordance to ASTM F606/F606M, ASTM A370, ASTM E18

Chemical Composition (%)											
Material Size	Heat No.	Spec.	C	Si	Mn	P	S	Cu	Ni	Cr	Mo
CARBON			0.55		0.60	0.040	0.050				
STEEL	M25706		0.46	0.26	0.81	0.010	0.033	0.12	0.05	0.11	0.02

Mechanical Property Inspection			
Item	Proof Load	Cone Stripping	Hardness
145,350		24-38	
Spec.	lbF	kN • kgf • lbf	HnC
			HnB • HB
			Hardness Treatment
			After 24 Hr.X °F (°C)

Mechanical Property Inspection	
Item	Absorbed Energy
	J • kgfm • ftlbF
Spec.	T: MIX. 800 F

Heat Treatment	
Item	Heat Treatment
	Q: FORGING Q (W.Q.)
	T: 1193 F/45M. (W.C.)
Results	Q: Quenching T: Tempering ST: Solution Treatment

Shape & Dimension	
Item	Shape & Dimension
	ANSI B18.2.2 GOOD
	Inspection
	Thread Precision
	ANSI B1.1 CLASS 2B GOOD
	Inspection
	Appearance
	Inspection
	GOOD
	Remarks:
	" DH U"
	Production Quantity 21,454 pcs.

502523

OFFICIAL SEAL  
 JEAN MARGHERIO  
 NOTARY PUBLIC - STATE OF ILLINOIS  
 MY COMMISSION EXPIRES: 10/1/08  
 at [Signature]

Material used for the nut was melted and manufactured in the USA. The nut was manufactured in the USA to the above specification.  
 We hereby certify that the material described has been manufactured and inspected satisfactorily with the requirement of the above specification.

Chief of Quality Assurance Section  
 [Signature]



Quanex

502523

MacSteel

ONE JACKSON SQUARE  
SUITE 500  
JACKSON, MICHIGAN 48201

CERTIFIED MATERIAL TEST REPORT

CUSTOMER ORDER NUMBER P001787	CUSTOMER PART NUMBER B1045SC15625	HEAT NUMBER M25706	WORK ORDER NUMBER 210547 101	DATE 9/06/07
----------------------------------	--------------------------------------	-----------------------	---------------------------------	-----------------

REPORT TO  
TRACI  
UNYTITE, INC.

ONE UNYTITE DRIVE  
PERU, IL 61354-9710

SHIP TO

UNYTITE, INC.  
ONE UNYTITE DRIVE  
PERU, IL 61354

ORDERED

GRADE 1045	SIZE 1 9/16" RND	LENGTH 24' 10 1/2"
---------------	---------------------	-----------------------

CUSTOMER SPECIFICATIONS  
SAE 1045; ASTM E381-01

CHEMICAL ANALYSIS - (BAR AVERAGE)

C	Mn	P	S	Si	Ni	Cr	Mo	Cu	Sn	Al
0.46	0.81	0.010	0.033	0.26	0.05	0.11	0.02	0.12	0.006	0.003
V	Nb									
0.065	0.001									

GRAIN SIZE SPECIFICATION ASTM E112 FINE GRAIN 5-8

MACROCLEANLINESS SPECIFICATION ASTM E381

PLATE I

PLATE II

AVERAGE	S	R	C	NONE
1	1	1	1	NONE

DECARB SPECIFICATION ASTM E1077

F TOTAL= 0.006

PAGE 1

We certify that these data are correct and in compliance with specified requirements.

MacSteel Monroe  
3000 East Front Street  
Monroe, MI 48161

Quality Assurance Representative

CONTINUED ON PAGE 2



Quanex

MacSteel

ONE JACKSON SQUARE  
SUITE 500  
JACKSON, MICHIGAN 49201

502523

CERTIFIED MATERIAL TEST REPORT

CUSTOMER ORDER NUMBER P001787	CUSTOMER PART NUMBER B1045SC15625	HEAT NUMBER M25706	WORK ORDER NUMBER 210547 101	DATE 9/06/07
----------------------------------	--------------------------------------	-----------------------	---------------------------------	-----------------

REPORT TO  
TRACI  
UNYTITE, INC.  
  
ONE UNYTITE DRIVE  
  
PERU, IL 61354-9710

SHIP TO  
UNYTITE, INC.  
  
ONE UNYTITE DRIVE  
  
PERU, IL 61354

ORDERED

GRADE 1045	SIZE 1 9/16" RND	LENGTH 24' 10 1/2"
---------------	---------------------	-----------------------

CUSTOMER SPECIFICATIONS  
SAE 1045; ASTM E381-01

REDUCTION RATIO

RATIO= 18.8 TO 1.0

\*\* MATERIAL 100% MELTED AND MANUFACTURED IN THE U.S.A. BY THE ELECTRIC ARC FURNACE AND CONTINUOUS CASTING METHOD. THE PRODUCT HAS NOT BEEN REPAIRED BY WELDING AND THIS MATERIAL HAS NOT BEEN EXPOSED TO MERCURY OR TO ANY OTHER METAL ALLOY THAT IS LIQUID AT AMBIENT TEMPERATURES DURING PROCESSING OR WHILE IN OUR POSSESSION. \*\*

PAGE 2 OF 2

We certify that these data are correct and in compliance with specified requirements.

MacSteel Monroe  
3000 East Front Street  
Monroe, NJ 48161

  
Quality Assurance Representative

# ROGERS BROTHERS INC.

HOT DIP  
GALVANIZING

502523

September 25, 2007

Unytite, Inc.  
Unytite Quality Department  
One Unytite Drive  
Peru, IL 61354

To Whom It May Concern:

This is to certify that the hot dip galvanizing of the following material on your Purchase Order number 1995 conforms to specification ASTM A-153.

10 Containers	1-1/4" A563 DH HHN	Lot#KT031	3.80 Avg. Mils.
10 Containers	1-1/4" A563 DH HHN	Lot#KT041	3.52 Avg. Mils.

This certification in no way implies anything other than the quality of our hot dip galvanizing as it pertains to your order.

Yours very truly,

ROGERS BROTHERS INC.

*Lorraine P. Shelburne*

Lorraine P. Shelburne  
Vice President

SUBSCRIBED AND SWORN  
BEFORE ME THIS 25TH  
DAY OF SEPTEMBER 2007, AD

*Judith A. Ferolie*  
NOTARY PUBLIC





# CERTIFICATE OF COMPLIANCE

Date December 16, 2008	Project No. CENTRAL & TYLER, WICHITA, KS	Order No. 9902	Customer's Order No. 08-521-1
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**CUSTOMER: MID AMERICAN SIGNAL INC.**

WE CERTIFY THAT THE MATERIALS USED ON THIS PROJECT ARE IN COMPLIANCE WITH THE REQUIREMENTS ON THIS ORDER.

THE MATERIAL USED ON THIS PROJECT WAS PRODUCED IN THE UNITED STATES AND THE ATTACHED CERTIFICATIONS REPRESENT THE MATERIAL USED ON THIS PROJECT.

MATERIAL CERTIFICATIONS:

MATERIAL	SPECIFICATIONS	HEAT NUMBER	GRADE	CYCLE
3 GA TUBE	A595	4188548	A	279
7 GA TUBE	A595	4189358	A	279
3/4" SCH 40	A500	E81353		
1/2" SCH 80	A500	TCP5B46399		
1/4" GUSSET	A36	4157582		
3/8" CLAMP PLATE	A36	8107889		
2" POLE PLATE CHARPY	A36	T1668		
3/4" X 3/4" X 1/8" CLIP	A36	N540883		
1/4" X 1" SUPPORT BAR	A36	E4974		
1/2" X 2-1/2" STL HH FRAME	A529	JG3269		
5/8" STUD - 5/8" ROUND BAR	A36	E2916		
501668 1-1/4" WASHER	F-436	2141028		
502127 2" WASHER	F-436	2131928		
501418 5/8" NUT	A583	S01412		
502523 1-1/4" NUT	A563	M25706		

This Certificate Notarized Only When Required

**JENNIFER WAGNER**

A Notary Public, do hereby certify that this affidavit was subscribed and sworn to before me by a duly authorized agent of the Union Metal Corporation.

This is to certify that the foregoing data is a true copy of the data furnished to us by the producing mill and from data resulting from tests performed at Union Metal Corporation

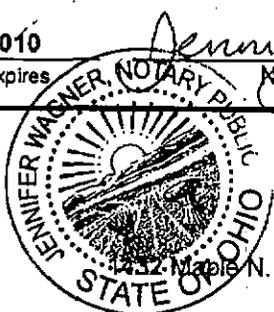
16<sup>th</sup> day of December, 2008

By

October 17, 2010

My commission expires

Notary Public





QF-308, TEST.A-595,  
Rev.2, Certified Test Reports.  
grossman.5/16/06

MATERIALS MELTED AND MANUFACTURED IN THE USA

CERTIFIED TEST REPORT

ITEM NO	DIMENSIONS	HEAT NUMBER	ASTM SPEC. NUMBER	DATE	CYCLE NO.	CUSTOMER ORDER NO.
				12-2-08	279	
			GRADE	PURCHASE ORDER	MANUFACTURER	
1	11 GAGE		A595	A		
2	7 GAGE					
3	3 GAGE	4188548			18594	ARCELORMITTAL
4	0 GAGE	4157113			15812	ARCELORMITTAL

ITEM NO	YIELD STRENGTH PSI	ULTIMATE STRENGTH PSI	% ELONG.	BEND TEST	% RED AREA	TEST NO
			IN 2"			
1						
2						
3	55689	65938	33.0			10593
4	55195	67665	33.5			10592

ITEM NO	CHEMICAL ANALYSIS											
	C	Mn	P	S	SI	Cu	Al	NI	Cr	Mo	V	N
1												
2												
3	.20	.80	.015	.006	.02	.04	.052	.01	.03	.01	.002	.0042
4	.20	.73	.008	.008	.01	.04	.063	.02	.03	.01	.000	.0025

This Certificate Notarized Only When Required

I, RENE L. GROSSMAN a Notary Public do hereby certify that this affidavit was subscribed and sworn to before me by a duly authorized signatory of the Union Metal Corporation.

This is to certify that the foregoing data is a true copy of the data furnished to us by the producing mill and from data resulting from tests performed at Union Metal Corporation.

this 9TH day of DECEMBER, 2008

UNION METAL CORPORATION

January 31, 2010

MY COMMISSION EXPIRES



# PRODUCT CERTIFICATION

WORK ORDER LOT NUMBER  
**FC2870 4188548**  
 SALES ORDER / RLS  
**411211 / 1**

ArcelorMittal Cleveland Inc.



SOLD TO 000786-000

**UNION METAL**  
 1935 16TH ST N.E. & HARRISBURG ROAD N.E.  
 CANTON, OH 44705  
 USA  
 Attn: Renee Grossman

CUSTOMER P.O. <b>18594-11</b>	CUSTOMER PART <b>3GA62-1/2-UMS28/R0</b>	QUANTITY <b>41,920 LBS</b>	COILS <b>1</b>	LADING NO <b>01268789</b>	SHIPMENT DATE <b>10/08/2008</b>					
SPECIFICATION 0.2470 Min -0.0000/ +0.0260 X 63.0000 + 1.5000 ME(IN) ID 24.0/30.0 OD 60.7/80.0 (IN) CL WT 40000/50000 (LBS) Hot Band Prime Carbon Structural Steel UMS 28 Change Stock- Brandlé UEXP										
CERTIFICATION REQUIREMENTS <b>UNION METAL SPEC UM-S28 DTD 10/5/94 SAE-1021 CS STRUCTURAL STEEL</b>										
<b>Chemical</b>										
C	Mn	P	S	Si	Cu	Ni	Cr	Mo	Sn	Al
0.2000	0.8000	0.0150	0.0060	0.0200	0.0400	0.0100	0.0300	0.0100	0.0070	0.0520
V	Cb	N	B	Ti	Sb	Ca				
0.0020	0.0000	0.0042	0.0000	0.0020	0.0020	0.0001				
<b>Origin - Made and Melted in USA</b>										
<b>Tag Numbers</b>										
695849										

I certify that the material listed herein has been inspected and tested in accordance with the methods prescribed in the governing specifications and based upon the results of such inspection and testing had been approved for conformance to the specifications.

**Matthew Kremer**  
 QA Manager



QF-308, TEST.A-595,  
Rev.2, Certified Test Reports.  
grossman.5/16/06

MATERIALS MELTED AND MANUFACTURED IN THE USA

CERTIFIED TEST REPORT

ITEM NO	DIMENSIONS	HEAT NUMBER	ASTM SPEC.		PURCHASE ORDER	MANUFACTURER
			NUMBER	GRADE		
1	11 GAGE		A595	A		
2	7 GAGE	4189358			18594	ARCELORMITTAL
3	3 GAGE	4188548			18594	ARCELORMITTAL
4	0 GAGE	4157113			15812	ARCELORMITTAL

ITEM NO	YIELD STRENGTH PSI	ULTIMATE STRENGTH PSI	% ELONG. IN 2"	BEND TEST	%RED AREA	TEST NO
2	61828	71195	32.3			10595
3	55689	65938	33.0			10593
4	55195	67665	33.5			10592

ITEM NO	CHEMICAL ANALYSIS											
	C	Mn	P	S	SI	Cu	Al	NI	Cr	Mo	V	N
1												
2	.22	.75	.009	.007	.02	.04	.063	.02	.03	.01	.001	.0032
3	.20	.80	.015	.008	.02	.04	.052	.01	.03	.01	.002	.0042
4	.20	.73	.008	.008	.01	.04	.063	.02	.03	.01	.000	.0025

This Certificate Notarized Only When Required

I, JENNIFER WAGNER a Notary Public do hereby certify that this affidavit was subscribed and sworn to before me by a duly authorized signatory of the Union Metal Corporation.

this 15TH day of DECEMBER, 2008

This is to certify that the foregoing data is a true copy of the data furnished to us by the producing mill and from data resulting from tests performed at Union Metal Corporation.

UNION METAL CORPORATION

BY

October 17, 2010

MY COMMISSION EXPIRES



# PRODUCT CERTIFICATION

WORK ORDER LOT NUMBER

**FC2840 4189358**

SALES ORDER / RLS

**411162 / 1**

ArcelorMittal Cleveland Inc.



ArcelorMittal

SOLD TO 000786-000

**UNION METAL**

**1935 16TH ST N.E. & HARRISBURG ROAD N.E.**

**CANTON, OH 44705**

**USA**

**Attn: Renee Grossman**

CUSTOMER P.O. <b>18594/13</b>	CUSTOMER PART <b>7GA36-UMS28/R0</b>	QUANTITY <b>35,890 LBS</b>	COILS <b>1</b>	LADING NO <b>01271956</b>	SHIPMENT DATE <b>10/16/2008</b>					
SPECIFICATION 0.1770 Min -0.0000/ +0.0140 X 36.5000 + 1.1250 ME(IN) ID 24.0/30.0 OD 66.2/80.0 (IN) CL WT 29200/36500 (LBS) Hot Band Prime Carbon Structural Steel UMS 28 Change Stock- Brandle UEXP										
CERTIFICATION REQUIREMENTS <b>Union Metal Spec UM-S28 DTD 10/5/94 SAE 1021 Mod Structural Steel</b>										
<b>Chemical</b>										
C	Mn	P	S	Si	Cu	Ni	Cr	Mo	Sn	Al
0.2200	0.7500	0.0090	0.0070	0.0200	0.0400	0.0200	0.0300	0.0100	0.0050	0.0630
V	Cb	N	B	Ti	Sb	Ca				
0.0010	0.0000	0.0032	0.0000	0.0020	0.0020	0.0002				
<b>Origin - Made and Melted in USA</b>										
<b>Tag Numbers</b>										
697334										

I certify that the material listed herein has been inspected and tested in accordance with the methods prescribed in the governing specifications and based upon the results of such inspection and testing had been approved for conformance to the specifications.

**Matthew Kremer**  
QA Manager



# Tubular Steel Inc

since 1963  
"Performance you can count on"

Tubular Steel Inc  
1031 Executive Parkway Drive  
Saint Louis, MO 63141  
Phone: (314) 851-9200  
Fax: (314) 851-9336

Customer PO: 19247  
Union Metal  
P O Box 9920  
Canton, OH 44711

Fax: 330-456-1720  
MTR Recipient: Jim Burand

TSI Sales ID: SO-048508  
Date: 10-30-08

Page 1

### Cover sheet/Certificate of compliance

- \*\* The material listed below was purchased to the stated specification, when marked
- \*\* Documents for the material listed below are attached

Size	Item / Customer Part No.	Certification
1.050x0.109	RND CARB WELD AR SO075SCH40-A501	ASTM A500 B AND/OR C

Heat number	Apology status
E81353	

Size	Item / Customer Part No.	Certification
4.500x0.237	RND CARB WELD AR SO400SCH40-A501	ASTM A500 B AND/OR C

Heat number	Apology status
627433	
627597	
615874	
615871	

Size	Item / Customer Part No.	Certification
5.563x0.258	RND CARB WELD AR SO500SCH40-X52	ASTM A500 B AND/OR C

Heat number	Apology status
A17601	

- \*\* Material referenced on the test report is certified by the manufacturer to meet the specification indicated under the testing procedures established, including any allowable variance
- \*\* Mechanical and chemical properties reported on mill test reports are sample results only and do not represent minimum, maximum, or average values
- \*\* Data reported on attached documents has been computer verified to meet the requirements of the specification

**BULL MOOSE TUBE COMPANY**

**BULL MOOSE TUBE GERALD FACILITY  
CERTIFICATION OF TESTS**

05/28/08  
Page 2 of 3

1819 Clarkson Rd.  
Chesterfield, Missouri 63017

**BILL TO** Tubular Steel, Inc.  
Attn: Accounts Payable  
1831 Executive Parkway Drive  
St. Louis MO 63141-6361

**SHIP TO** Tubular Steel, Inc.  
1700 Tubular Steel Road  
Stacerton

IL 62088-1076

BL Number 168809

Ship Via

35\_F35

1.05" X 0.109 HR X 21' 5"										Order #	247728			
26.7 mm										Purchase Order #	2349			
ASTM A500-03 Grade B Melted & Manufactured in the USA										Item #	135735 0672			
Ticket # = 13047676										P				
Heat # = E81853										NI	VA	YLD psi	T8N psi	ELN %
C	MN	P	S	AL	SI	CB	CU	CR						
.170	.400	.007	.008	.037	.012	0.000	0.000	0.000	0.000	0.000	0.000	70169	74915	37
1.05" X 0.108 HR X 21' 5"										Order #	247728			
26.7 mm										Purchase Order #	2349			
ASTM A500-03 Grade B										Item #	135735 0672			
Ticket # = 13047672										P				
Heat # = E81886										NI	VA	YLD psi	TSN psi	ELN %
C	MN	P	S	AL	SI	CB	CU	CR						
.160	.410	.015	.001	.092	.027	0.000	0.000	0.000	0.000	0.000	0.000	71428	77408	30
1.05" X 0.109 HR X 21' 5"										Order #	247728			
26.7 mm										Purchase Order #	2349			
ASTM A500-03 Grade B										Item #	135735 0672			
Ticket # = 13047670										P				
Heat # = C45801										NI	VA	YLD psi	TSN psi	ELN %
C	MN	P	S	AL	SI	CB	CU	CR						
.050	.390	.020	.008	.028	.020	0.000	0.000	0.000	0.000	0.000	0.000	66722	68243	31
1.05" X 0.109 HR X 21' 5"										Order #	247728			
26.7 mm										Purchase Order #	2349			
ASTM A500-03 Grade B										Item #	135735 0672			
Ticket # = 13047671										P				
Heat # = E81396										NI	VA	YLD psi	TSN psi	ELN %
C	MN	P	S	AL	SI	CB	CU	CR						
.190	.510	.013	.010	.030	.010	0.000	0.000	0.000	0.000	0.000	0.000	72886	78859	26

Shipping Clerk:



THIS WELDED STEEL TUBING IS MANUFACTURED IN THE UNITED STATES OF AMERICA AND HAS BEEN PRODUCED IN ACCORDANCE WITH THE STATED SPECIFICATION. LADLE CHEMISTRIES ARE REPORTED FROM DOCUMENTS PROVIDED BY THE SUPPLYING STEEL MILL. ANY PHYSICAL AND MECHANICAL TESTING RESULTS SHOWN ON THIS CERTIFICATION ARE CORRECT AS CONTAINED IN THE RECORDS OF THE COMPANY.



# Tubular Steel Inc

Since 1963  
"Performance you can count on"

Tubular Steel Inc  
1031 Executive Parkway Drive  
Saint Louis, MO 63141  
Phone: (314) 851-9200  
Fax: (314) 851-9336

Customer PO: 19623  
Union Metal  
P O Box 9920  
Canton, OH 44711

Fax: 330-456-1720  
MTR Recipient: Jim Burand

TSI Sales ID: SO-052407  
Date: 11-20-08

Page 1

## Cover sheet/Certificate of compliance

- \*\* The material listed below was purchased to the stated specification, when marked
- \*\* Documents for the material listed below are attached

Size	Item / Customer Part No.	Certification
0.840x0.147	RND CARB WELD AR S0050SCH80-A501	

Heat number	Apology status
TCP5B46399	

Size	Item / Customer Part No.	Certification
1.660x0.140	RND CARB WELD AR S0125SCH40-A501	ASTM A500 B AND/OR C

Heat number	Apology status
U61810	

Size	Item / Customer Part No.	Certification
2.375x0.218	RND CARB WELD AR S0200SCH80-A501	ASTM A500 B AND/OR C

Heat number	Apology status
1802245	

Size	Item / Customer Part No.	Certification
1.750x0.188	RND CARB WELD CD D188X0175-A513	

\*\* Material referenced on the test report is certified by the manufacturer to meet the specification indicated under the testing procedures established, including any allowable variance

\*\* Mechanical and chemical properties reported on mill test reports are sample results only and do not represent minimum, maximum, or average values

\*\* Data reported on attached documents has been computer verified to meet the requirements of the specification



# Sharon Tube Company

184 Mill Street  
PO Box 408  
Staunton, PA 19164  
(610) 349-1117  
(724) 883-1031 (Toll)

# PRODUCT CERTIFICATION

HEAT NUMBER  
**top5b46399**  
SALES ORDER  
**151588**

SOLD TO

SHIP TO

TUBULAR STEEL  
1700 TUBULAR  
STAUNTON, IL 62088  
USA  
Attn: Receiving

TUBULAR STEEL  
1700 TUBULAR  
STAUNTON, IL 62088  
USA  
Attn: Receiving

CUSTOMER P.O. 3413	CUSTOMER PART	QUANTITY 182 Pcs	BNDLS 2	LADING NO 00002818	SHIPMENT DATE 03/27/2008					
SPECIFICATION CSP0840Xh80P021 1 1/2", XH, 80L PE, 21', 0.0", ASTM A63-Type F Grade A										
CERTIFICATION REQUIREMENTS										
Chemical, Ladle Analysis, %										
C	Mn	P	S	Si	Al	Cu	Ni	Cr	Mo	V
.12	.44	.020	.016	.018	.049	.013	.020	.022	.004	.001
Sn	SuX	CH								
.001	.050	.200								
Pipe Mechanical Test Results										
	Yield, PSI	Tensile, PSI	Elong, 4-2"	Y/T Ratio	Hard, HB	Hydro, PSI	Sand	Flatten		
300120/004	34480	54180	48	.636			850	Pass		
300120/005	34480	54180	48	.636			850	Pass		
<p>Certified Test Report Type 3.1B in accordance with EN 10201/ISO 10474/DIN 9048. Material has not come in direct contact with mercury, any of its compounds or any mercury bearing devices during the manufactured process, tests or inspections. Material does not contain any polybrominated biphenyls (PBB) or polybrominated diphenyl ethers (PBDE).</p> <p>Welded Steel Pipe Meeting the Requirements of ASTM A63-05 Type F Grade A/ASME SA-33 Type F 2001 Edition, A03 Revision or ASTM A63-05 Type E Grade B/ASME SA-33 Type E Grade B 2001 Edition, A03 Revision. Each length of pipe Hydrostatically Tested. No weld repairs have been performed. Yield strength determined @ 0.2% offset. All bend or flatten tests passed. Manufactured in the U.S.A.</p> <p style="text-align: center;">End of Certification</p>										

Steven M. Grabert, Manager, Technical Services, being duly sworn according to law, deposes and says that the figures set forth above are correct, as contained in the figures of Sharon Tube Company.



QF-308, TEST.A-595,  
Rev.1, Certified Test Reports.5yrs.  
Sbayala.5/16/01, SbA.UMC.QA

MATERIALS MELTED AND MANUFACTURED IN THE USA

1/4" PLATE MEETS OR EXCEEDS ASTM A36 TESTED TO ASTM A6					<b>CERTIFIED TEST REPORT</b>									
					DATE 10-13-08	CYCLE NO.			CUSTOMER ORDER NO.					
ITEM NO	DIMENSIONS		HEAT NUMBER	ASTM SPEC.		PURCHASE		MANUFACTURER						
				NUMBER	GRADE	ORDER								
1	3 GAGE		4157582	A36	A	16265		ARCELORMITTAL						
<b>MECHANICAL TESTS</b>														
SMPL NO	YIELD STRENGTH PSI	ULTIMATE STRENGTH PSI	% ELONG.		BEND TEST	%RED AREA	TEST NO							
			IN 2"	IN 8"										
1	47332	67572	31.0				N/A							
2	46563	66084	32.0				N/A							
<b>CHEMICAL ANALYSIS</b>														
ITEM NO	C	Mn	P	S	SI	Cu	Al	NI	Cr	Mo	V	N		
	1	.22	.70	.006	.007	.02	.05	.062	.02	.03	.01	.000	.0035	
<p>This Certificate Notarized Only When Required</p> <p>I, <u>RENE L. GROSSMAN</u> a Notary Public do hereby certify that this affidavit was subscribed and sworn to before me by a duly authorized signatory of the Union Metal Corporation.</p> <p>this <u>13TH</u> day of <u>OCTOBER, 2008</u></p> <p>January 31, 2011 MY COMMISSION EXPIRES</p>														
										UNION METAL CORPORATION BY:				



# PRODUCT CERTIFICATION

WORK ORDER LOT NUMBER  
**FB7019 4157582**  
 SALES ORDER / RLS  
**389908 / 1**

ArcelorMittal Cleveland Inc.



SOLD TO 000786-000

**UNION METAL**  
 1935 16TH ST N.E. & HARRISBURG ROAD N.E.  
 CANTON, OH 44705  
 USA  
 Attn: Renee Grossman

CUSTOMER P.O. <b>16265-18</b>	CUSTOMER PART <b>3GA55-1/2-UMS28/R0</b>	QUANTITY <b>48,990 LBS</b>	COILS <b>1</b>	LADING NO <b>01200751</b>	SHIPMENT DATE <b>06/18/2008</b>					
SPECIFICATION 0.2470 Min -0.0000/ +0.0240 X 56.0000 + 1.5000 ME(IN) ID 30.0/30.0 OD 63.5/69.3 (IN) CL WT 40000/50000 (LBS) Hot Band Prime Carbon Structural Steel UMS 28 Change Stock- Brandle UEXP										
CERTIFICATION REQUIREMENTS <b>Union Metal Spec UM-S28 DTD 10/5/94 SAE 1021 Mod Structural Steel</b>										
<b>Chemical</b>										
C	Mn	P	S	Si	Cu	Ni	Cr	Mo	Sn	Al
0.2200	0.7000	0.0060	0.0070	0.0200	0.0500	0.0200	0.0300	0.0100	0.0110	0.0620
V	Cb	N	B	Ti	Sb	Ca				
0.0000	0.0000	0.0035	0.0001	0.0010	0.0030	0.0003				
<b>Origin - Made and Melted in USA</b>										
<b>Tag Numbers</b>										
657771										

I certify that the material listed herein has been inspected and tested in accordance with the methods prescribed in the governing specifications and based upon the results of such inspection and testing had been approved for conformance to the specifications.

**Matthew Kremer**  
 QA Manager

**NUCOR**  
PLATE MILL

P.O. Box 279  
Winston, NC 27986  
(252) 366-3700

**Mill Test Report**

Page 1

**NUCOR**  
It's our Nature.

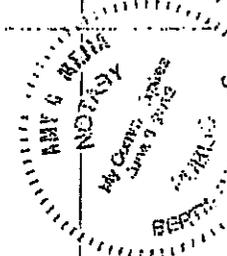
*AL-384-6400E*  
*pc-Cores*  
*BL 67804*

Issuing Date: 10/16/2008 B/L No.: 216368 Load No.: 217370 Our Order No.: 686211 Cust. Order No.: 10-34891-UM  
Vehicle No: 7334 Sold To: KENILWORTH STEEL 106 EAST MARKET STREET WARREN, OH 44481 Ship To: Kenilworth Steel 621 Dana WARREN, OH 44483  
Specification: 0.3750" x 96.000" x 120.000" ASTM A36-08/ASTM A709 Grade 36-07/ASME SA36-03a

Marking:

Heat No	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	Alz	V	Nb	Ti	N	Ca	B	Sn	CEQ	PCM
8107869	0.17	0.82	0.016	0.003	0.11	0.27	0.07	0.10	0.02	0.007	0.005	0.003	0.002	0.008	0.0001	0.011	0.011	0.35	0.24

Plate Serial No	Tensile Test			Charpy Impacts			Mils Ave.							
	Pieces	Tons	Dir.	(psi) Yield	(psi) Tensile	Elongation % in 2"		Elongation % in 8"	(ft-lbs) 1 shear	(ft-lbs) 2 shear	(ft-lbs) 3 shear	(%) shear	(%) shear	Temp (°F) Ave.
8107869-08	15	9.18	T	45,800	71,000	25.8	25.8	H-L	76.9	63.0	60.6	66.8	40	15
8107869-09	22	13.47	T	43,600	68,200	24.6	24.6	H-L	76.9	63.0	60.6	66.8	40	15



*James G. Smith*  
*10/16/08*

NFCM, T1 and T2, 15ft-lbs @ +40 F (20J @ +4 C), H frequency.

Manufactured to fully killed practice by Elsidio Aro Furnace. Welding or weld repair was not performed on this material. Mercury has not been used in the direct manufacturing of this material. Produced as continuous cast ultrafine plate as-rolled, unless otherwise noted in Specification.

Yield by 0.5EUL method unless otherwise specified.  $Ceq = C + (Mn/16) + ((Cr + Mo + V)/5) + ((Cu + Ni)/15)$

Pcm =  $C + (Si/50) + (Mn/20) + (Cu/20) + (Ni/60) + (Cr/20) + (Mo/16) + (V/10) + 5B$

Melted and manufactured in the USA. ISO 9001-2000 certified (#12449-0) by BRI Quality System Registrar (#6985-09). PED 97729/EC 7/2 Annex 1, Para. 4.3 Compliant. DIN 50048 3.1.B/EN 10204 3.1(2005) compliant. For ABS grades only, Quality Assurance certificate 08-WMPQA-383

We hereby certify that the contents of this report are accurate and correct. All test results and operations performed by the material manufacturer are in compliance with the applicable specifications, including customer specifications.

*T. A. Deprella*

T. A. Deprella, Metallurgist

10/16/2008 2:31:15 PM

TEST CERTIFICATE

SHIP TO: ARCELORMITTAL PLATE LLC  
KENILWORTH STEEL CO  
621 DANA ST NE  
WARREN OH 44483

PAGE NO: 01 OF 02  
FILE NO: 4269-01-12  
MILL ORDER NO: 20004-005  
MELT NO: T1668  
DATE: 08/12/08

SOLD TO: KENILWORTH STEEL COMPANY  
106 EAST MARKET STREET  
SUITE 809  
WARREN OH 44481

SEND TO:

01-N

PLATE DIMENSIONS / DESCRIPTION

TOTAL QTY	GAUGE	WIDTH	LENGTH	DESCRIPTION	PIECE WEIGHT
3	2"	96"	240"	RECTANGLE	13068#

CUSTOMER INFORMATION

CUSTOMER PO: 09-34848

SPECIFICATION (S)

THIS MATERIAL HAS BEEN MANUFACTURED AND TESTED IN ACCORDANCE WITH PURCHASE ORDER REQUIREMENTS AND SPECIFICATION(S).

ASTM A709-GR36 YR 07  
IMPACTS WAIVED ASME SA36 ED 07 & ASTM A36 05  
MATERIAL PRODUCED UNDER A CERTIFIED QUALITY MGMT SYSTEM COMPLYING WITH ISO 9001 ABS-QE CERT. NO. 30130

CHEMICAL COMPOSITION

MELT	C	MN	P	S	CU	SI	NI	CR	MO
MELT:T1668	.18	1.03	.025	.014	.12	.20	.07	.08	.01
MELT:T1668	V	AL	CB						
	.004	.027	.001						

TENSILE PROPERTIES

LOC	DIR	YIELD STRENGTH PSI X 100	TENSILE STRENGTH PSI X 100	ELONGATION GAGE LGTH	%
BOT.	TRANS.	363	679	2.00"	32.0
BOT.	TRANS.	430	698	2.00"	28.0

GENERAL INFORMATION

ALL STEEL HAS BEEN MELTED AND MANUFACTURED IN THE U.S.A.  
MERCURY OR MERCURY COMPOUNDS ARE NOT USED IN THE  
MANUFACTURE OF ARCELORMITTAL PLATE LLC PRODUCTS.

APPROVED AND SUBSCRIBED BEFORE ME  
THIS 12th DAY OF 08/2008

NOTARY PUBLIC

NOTARIAL SEAL  
CAROL L. GLODY, NOTARY PUBLIC  
COATESVILLE, CHESTER CO., PA  
MY COMMISSION EXPIRES MAY 27, 2010

WE HEREBY CERTIFY THE ABOVE  
INFORMATION IS CORRECT:

QUALITY ASSURANCE LABORATORY  
COATESVILLE, PA 19320

ELINORE ZAPLETNY  
SUPERVISOR - TEST REPORTING

A4439E

A3465-3467E

UNUSUAL  
CONSISTENT  
B/L 67840

NOHMKR

CHARPY WORKSHEET

JAB337-301

Tensile Testing  
 Metallurgical Laboratory  
 Phn: 216.641.3290  
 Fax: 216.641.3291

KENILWORTH STEEL  
 Attn: GREG REGALIA  
 Phn: 800-537-5283  
 Fax: 330-399-2144

12-35108

UPHOLSTERING METAL  
 COUSCOUS  
 BK 67840

Specimen ID	Size	Temp	Pt. lbs	Lat Exp	Charpy	P/F
8/2A4390E 01	Full	+40 F	68			PASS
		AVG	93			
			25			
			62			
8/2A4387E 01	Full	+40 F	57			PASS
			48			
			15			
			40			
8/2A4439E 01	Full	+40 F	44			PASS
			76			
			52			
			57			
4/2A4365E 01	Full	+40 F	40			PASS
			72			
			75			
			62			
5/2A4631E 01	Full	+40 F	72			PASS
			54			
			53			
			60			

The above results are preliminary for information purposes only. Certified Test Reports will be mailed.

T-884

T-714 P.01

1-930-298-9184

FROM: KENILWORTH STEEL, INC

DEC 05 '08 08:59



196 Bell Avenue  
CARNEGIE, PA 15106

**CERTIFICATION OF MATERIAL**

**CUSTOMER:** UNION METAL CORP  
1432 MAPLE AVE NE  
CANTON, STARK  
OH 44705-1720

**SALES ORDER NUMBER:** 10779717 000010  
**CUSTOMER PURCHASE ORDER:** 13707  
**CUSTOMER PART NUMBER:**  
**DELIVERY NUMBER:** 81145248 000010

**MATERIAL NUMBER:** 160000004  
**INVENTORY DESCRIPTION:** ANG A36 .75 X .75 X .125 X 240

**FINISHED ITEM DESCRIPTION:** CARB ANG A36  
0.75" X 0.75" X 0.125" X 240"

**HEAT NUMBER (s)**                      **SLAB/COIL/TEST NUMBER (if applicable)**  
N540863

**CERTIFICATION**

A survey of our material sources has indicated that neither mercury nor radioactive substances is introduced into their products, or is used in any of their processes. While we make no independent tests for mercury or radiation, there is nothing in Ryerson's system which could be expected to introduce contamination of either type.

This document certifies that the material described above was shipped in accordance with your order. The producer of the material has certified to Ryerson that it was produced in accordance with the following spec:

ASTM A36      ASME SA36

Authorized Agent of Ryerson

11/09/2007

010104



CAMBRIDGE STEEL MILL  
160 ORION PLACE  
CAMBRIDGE ON N1T 1R9 CAN  
(519) 740-2488

005837

Chemical and Physical Test Report  
MADE IN CANADA

SHIP TO RYERSON TULL 5 CLINTON STREET 314-231-1020 ST LOUIS, MO 63102	INVOICE TO RYERSON TULL PROCUREMENT/CHIC P.O. BOX 8000 A CHICAGO, IL 60680	SHIP DATE 07/21/05	CUST. ACCOUNT NO 40000093
---	---	-----------------------	------------------------------

SHAPE & SIZE	GRADE	SPECIFICATION	SALES ORDER	CUST P.O. NUMBER
A3/4 X 3/4 X 1/8	A36	ASTM A36/A36M-04; CSA-G40.21-300W-98(44W)	5048032-01	3A6642

HEAT I.D.	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Nb	Sn
NS40863	.12	.60	.008	.038	.17	.45	.11	.16	.096	.005	.003	.014

Mechanical Test: Yield 53613 PSI, 369.65 MPA Tensile: 73388 PSI, 505.99 MPA %El: 24.0/8in, 24.0/200MM  
 THIS GRADE ALSO MEETS ASME SA36-01 SPECIFICATION  
 Mechanical Test: Yield 53333 PSI, 367.72 MPA Tensile: 74399 PSI, 512.96 MPA %El: 24.5/8in, 24.5/200MM  
 THIS GRADE ALSO MEETS ASME SA36-01 SPECIFICATION  
 CUST ITEM NUMBER: J0104

SHAPE & SIZE	GRADE	SPECIFICATION	SALES ORDER	CUST P.O. NUMBER
C2 X 1 X 1/8	A36	ASTM A36/A36M-04; CSA-G40.21-300W-98(44W)	5023635-01	3A6310

HEAT I.D.	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Nb	Sn
NS41524	.15	.68	.013	.040	.23	.31	.12	.14	.055	.005	.003	.012

Mechanical Test: Yield 53587 PSI, 369.47 MPA Tensile: 74973 PSI, 516.92 MPA %El: 27.0/8in, 27.0/200MM  
 THIS GRADE ALSO MEETS ASME SA36-01 SPECIFICATION  
 Mechanical Test: Yield 53609 PSI, 369.62 MPA Tensile: 73176 PSI, 504.53 MPA %El: 21.0/8in, 21.0/200MM  
 THIS GRADE ALSO MEETS ASME SA36-01 SPECIFICATION  
 CUST ITEM NUMBER: 010542

Customer Notes  
 A36: ASTM A36-00A & A709-00A ASME-SA36-97A  
 This material, including the billets, was produced and manufactured in Canada.  
 A.J. Turner  
 Quality Assurance Manager  
 Mill Group

*Eric Hand*

Mgr. Metallurg. Svcs.  
CAMBRIDGE STEEL MILL

JOSEPH T. RYERSON & SONS, INC.  
RECEIVING DEPARTMENT

JUL 25 2005

SUBJECT TO INSPECTION

THE ABOVE FIGURES ARE CERTIFIED EXTRACTS FROM THE ORIGINAL CHEMICAL AND PHYSICAL TEST RECORDS AS CONTAINED IN THE PERMANENT RECORDS OF COMPANY.

SOLD YOUNGSTOWN PIPE & SUPPLY INC  
 4100 LAKE PARK RD  
 TO: PO BOX 3467  
 YOUNGSTOWN, OH 44513-0000

SHIP YOUNGSTOWN PIPE  
 TO: 219 PHELPS ST  
 YOUNGSTOWN, OH 44512-0000

**NUCOR**  
 BAR MILL GROUP  
 NUCOR STEEL AUBURN, INC.

**CERTIFIED MILL TEST REPORT**

Ship from:  
 Nucor Steel - Auburn  
 25 Quarry Road  
 Auburn, NY 13021  
 315-253-4561

Date: 25-Aug-2008  
 B.L. Number: 352509  
 Load Number: 102519

Material Safety Data Sheets are available at [www.nucorbar.com](http://www.nucorbar.com) or by contacting your inside sales representative.

HEAT NUM. *	DESCRIPTION	PHYSICAL TESTS				CHEMICAL TESTS														
		YIELD P.S.I.	TENSILE P.S.I.	ELONG % IN 8"	BEND	WT%	DEF	C	Ni	Cr	P	Mo	S	V	Si	Co	Cu	Sn	C.E.	
PO# =>	83141	53,200	73,300	23.8%																
E4974	Nucor Steel - Auburn Inc	367MPa	505MPa																	
E4974	14x1" FL 20" A36/44W	54,600	73,600	25.0%																
	CSA G40.21-98 44W/ASTM A36/A36M-	376MPa	507MPa																	
	ASTM A709/A709M-07 GR 36																			
	ASME SA36-2007 EDITION																			
	ASTM A36/A36M-05																			

COOPER TOWN PIPE & SUPPLY INC  
 100 W. MAIN ST. COOPER TOWN, NY 13320  
 THESE TESTS WERE DONE BY  
 SOLD TO: [Signature]  
 YOUR P.O. # [Signature]  
 SIGNATURE CENTER SERVICES

I HEREBY CERTIFY THAT THE ABOVE FIGURES ARE CORRECT AS CONTAINED IN THE RECORDS OF THE CORPORATION.

ALL MANUFACTURING PROCESSES OF THE STEEL MATERIALS IN THIS PRODUCT, INCLUDING MELTING, HAVE OCCURRED WITHIN THE UNITED STATES. ALL PRODUCTS PRODUCED ARE WELD FREE.

QUALITY CONTROL  
 Jim Biemel



Roanoke Bar Division

Steel Dynamics - Roanoke Bar Division  
 P.O. Box 13948 Roanoke, VA 24038  
 Office: 540-342-1831 Fax: 540-342-9437

Test and Inspection

**YOUNGSTOWN PIPE & SUPPLY INC**  
 PHONE # 330.783.2700  
 THESE TESTS REPORTS APPLY TO:  
 SOLD TO: UNION  
 YOUR P.O. # 1985  
 YS&S O.M. # 57383  
 SIGNED BY WOMY

NO. 57743-1  
 ROANOKE

YOUNGSTOWN PIPE & SUPPLY INC  
 4100 LAKE PARK RD.  
 YOUNGSTOWN OH 44513-0000

Date 2/26/08

HEAT NUMBER	SIZE	1-YIELD Pt. KSI	ULTIMATE KSI	ELONG 8 IN.	BEND TEST	GRADE				
JG3269	FLATS 1/2 X 2 1/2	54.8	85.4	25.0		A529-50				
PURCHASE ORDER NUMBER	NUMBER PIECES	2-YIELD Pt. KSI	ULTIMATE KSI	ELONG 8 IN.	BEND TEST	GRADE				
80640	144 PIECES 20'	52.6	80.7	26.3		A529-50				
HEAT NUMBER	SIZE	1-YIELD Pt. MPA	ULTIMATE MPA	ELONG 203mm	BEND TEST	GRADE				
JG3269	FLATS 12.7 X 63.5	377.8	588.8	25.0		A529-50				
PURCHASE ORDER NUMBER	NUMBER PIECES	2-YIELD Pt. MPA	ULTIMATE MPA	ELONG 203mm	BEND TEST	GRADE				
80640	144 PIECES 20'	362.7	556.4	26.3		A529-50				
C	MN	S	P	SI	CR	NI	MO	CU	V	NB
.25	1.05	.025	.015	.24	.06	.12	.03	.26	.002	.002

MERCURY, RADIUM OR OTHER ALPHA SOURCE MATERIALS IN ANY FORM HAVE NOT BEEN USED IN THE PRODUCTION OF THIS MATERIAL. NO WELD REPAIR HAS BEEN PERFORMED.

Approved ABS QA Mill. Certificate No. 00NN10108-X.

This material was melted and manufactured in the USA by basic Electric Furnace processes to meet specification: ASTM A529-05 GRADE 50

The tensile values stated in either inch-pound units or SI units are to be regarded as separate as defined in the ASTM scope for this material. Unless a metric specification is ordered, this material has been tested and meets the requirements of the inch-pound ranges.

This is to certify the above to be a true and accurate report as contained in the records of this company.

Engineer of Tests: Charles R. Charlton

**CHARPY WORKSHEET**

Tensile Testing.  
 Metallurgical Laboratory.  
 Phn: 216.641.3290  
 Fax: 216.641.3291

JAS310-718  
 YOUNGSTOWN PIPE & SUPPLY  
 Attn: MIKE MONTLER  
 Phn: 330-744-2222  
 Fax: 330-744-8480

SB 80022-M

No.	Size Temp	FT_lbs	Lat Exp	Kshear	P/F
1336	/8108228 01 2/3 +40 F	59			PASS
	Avg	47			
		57			
		54			
	/8107521 01 Full +40 F	64			PASS
		20			
		73			
	Avg	52			
	/JG0565 01 2/3 +40 F	28			PASS
		28			
		30			
	Avg	29			
	/JG3269 01 2/3 +40 F	21			PASS
		21			
		22			
	Avg	21			
	/8108231 01 Full +40 F	58			FAIL
		62			
		63			
	Avg	61			
	/8108231 01 Full +40 F	6			
		44			
		6			
	Avg	19			

YOUNGSTOWN PIPE & SUPPLY INC.  
 MACHINE # 330.713.2700  
 THESE TESTS REPORTS APPLY TO:  
 JALOC MONTLER  
 1985 ST 383  
 1985 ST 383  
 YOUNGSTOWN, OH 44615  
 RECEIVED BY TRS (10/23/08)  
 ISSUES O.M. #

The above results are preliminary for information purposes only. Certified Test Reports will be mailed.





196 Bell Avenue  
CARNEGIE, PA 15108

**CERTIFICATION OF MATERIAL**

**CUSTOMER:** UNION METAL CORP  
1432 MAPLE AVE NE  
CANTON, STARK  
OH 44705-1720

**SALES ORDER NUMBER:** 11112756 000030  
**CUSTOMER PURCHASE ORDER:** 17447  
**CUSTOMER PART NUMBER:**  
**DELIVERY NUMBER:** 81673096 000020

**MATERIAL NUMBER:** 160000156  
**INVENTORY DESCRIPTION:**

**FINISHED ITEM DESCRIPTION:** CARB Bar RD HR A36  
0.625" X 240"

**HEAT NUMBER(s)**                      **SLAB/COIL/TEST NUMBER (if applicable)**  
E2916

**CERTIFICATION**

A survey of our material sources has indicated that neither mercury nor radioactive substances is introduced into their products, or is used in any of their processes. While we make no independent tests for mercury or radiation, there is nothing in Ryerson's system which could be expected to introduce contamination of either type.

This document certifies that the material described above was shipped in accordance with your order. The producer of the material has certified to Ryerson that it was produced in accordance with the following spec:

ASTM A36      ASME SA36

07/21/2008

Authorized Agent of Ryerson

5-464205

**CERTIFIED TEST REPORT**

480 pcs. = 9984  
 HEAT# E2916  
 DATE SHIPPED 6/11/2008  
 SHIPMENT# 0316836  
 SIZE: RD 5/8 20' 0"  
 ORDER ITEM# 202865/01  
 SOLD TO: RYERSON TULL-EAST  
 FAX#/EMAIL: 4122766664

CUST. P.O. 4500206939  
 PART #: 160000156  
 GRADE: ASTM A36-05/CSA 44W  
 SPEC A709-06A GR36  
 SUPP. REQ:  
 SHIP TO: RYERSON - PITT

**NUCOR**  
 BAR MILL-AUBURN  
 NUCOR STEEL AUBURN, INC.  
 P.O. BOX 2008  
 QUARRY ROAD  
 AUBURN, NY 13021

**CHEMICAL ANALYSIS %**

C	MN	SI	P	S	CU	NI	CB	MO	SN	V	CB	TI	B	N2	O2
150	750	190	014	039	370	0900	140	025	015	000	0020	0010	0002	XXX	XXX

**MECHANICAL RESULTS**

YIELD	TENSILE	GAUGE	% ELONG	BEND PIN DIA	% R.A.
K.S.I.	K.S.I.	LENGTH	ELONG	IN. DIA	R.A.
51.50	71.70	8	25.0	.0	.0
52.00	72.90	8	26.2	.0	.0
MPa	MPa	GAUGE	% ELONG	BEND PIN DIA	R.A.
		LENGTH	ELONG	IN. DIA	R.A.

**CHARPY IMPACT TEST**

TEMP. F.	FT./LB.	SUBSIZE SPECIMEN	SAMPLE

I CERTIFY THESE RESULTS TO BE CORRECT AS CONTAINED IN THE RECORDS OF THE COMPANY.

JIM BIERNAT, METALLURGIST  
 STATE OF NEW YORK SS.  
 COUNTY OF CAYUGA

Grain Size	Reduction Ratio	As-Rolled Hardness	D.I.	C.F.	C.I.
XXX	XXX	XXX	XXX	.370	XXX

**JOMINY END-QUENCH HARDENABILITY RESULTS (HRC)**

J1	J2	J3	J4	J5	J6	J7	J8	J9	J10	J11	J12
J13	J14	J15	J16	J18	J20	J22	J24	J26	J28	J30	J32

Jim Biernat

(print)

AFTER BEING DULY SWORN BY ME, I DECLARE THAT THESE RESULTS ARE CORRECT AS CONTAINED IN THE RECORDS OF NUCOR STEEL AUBURN, INC

*Jim Biernat*

(sign)

SUBSCRIBED AND SHOWN BEFORE ME

ALL MANUFACTURING PROCESSES FOR THIS STEEL, INCLUDING MELTING FROM SCRAP AND HOT ROLLING HAVE BEEN PERFORMED IN THE U.S.A. NO WELD REPAIR PERFORMED; STEEL NOT EXPOSED TO MERCURY OR ANY LIQUID ALLOY WHICH IS LIQUID AT AMBIENT TEMPERATURES.

**CUSTOMER SPECIAL INSTRUCTIONS:**  
 A36 CERTIFIED TO ASME SA36 1998 EDITION AND ASTM A709-97A GR.36. THIS WAS PRODUCED UNDER AUBURN QUALITY PROGRAM AUDITED 5/13/93 BY J.T. RYERSON CONFORMS TO JTR #0103-T,C-001 & 2150-U STRAND CAST FROM 5" BLT., SILICON KILLED, REDUCTION RATIO > 8/1

THIS \_\_\_\_\_ DAY OF \_\_\_\_\_

L.S.

THIS CERTIFICATE IS NOTARIZED ONLY WHEN REQUESTED

BB/00625  
 155800

501668



**TECHNICAL STAMPING, INC.**

50600 E. RUSSELL SCHMIDT BLVD.  
 CHESTERFIELD TWP., MI 48051  
 PH(586)948-3285 / FX(586)948-3286

**MATERIAL CERTIFICATION**

CUSTOMER NAME		CUSTOMER ORDER NUMBER				DATE		
Flexalloy Inc.		P218096				2/6/08		
PART NUMBER - CUSTOMER LOT NO.		LOT NUMBER				QUANTITY		
1-1/4" F436 Hdg 125NWA30G		1207-813H				6,000		
STEEL GRADE	HEAT	C	MN	P	S	SI	AL	REVISION
SAE 1050	2141028	.54	.75	.009	.002	.037	.047	ASTM F-436-04
SPECIFICATION		ACTUAL				GAUGE		
O.D -		2.469 - 2.531		2.503 - 2.505		CALIPER		
I.D -		1.375 - 1.438		1.387 - 1.390		CALIPER, PIN GAUGE		
THICKNESS-		.136 - .177		0.139		MICROMETER		
FLAT-		Max .010		.005		CALIPER		
HEAT TREAT -		38 - 45 HRC		40 - 43				
PLATING-				See Cert				
OTHER				N / A				

WE HEREBY CERTIFY THIS PRODUCT WAS PRODUCED UNDER A ISO-9001:2000 QUALITY ASSURANCE SYSTEM. ISO-9001:2000 CERTIFICATION NUMBER-1265 - DATE OF REGIS. JAN. 3, 2003  
 ALL MATERIALS ARE MADE AND MELTED IN THE U.S.A. THIS PRODUCT WAS MANUFACTURED IN CHESTERFIELD, MICHIGAN, U.S.A. THIS PRODUCT CONFORMS TO ALL REQUIREMENTS  
 FOR WASHERS AS PRODUCED ACCORDING TO A.S.T.M. F-436-04. THE ABOVE TEST RESULTS APPLY ONLY TO THE ITEMS TESTED. THIS TEST REPORT MUST NOT BE REPRODUCED  
 EXCEPT IN FULL WITHOUT PRIOR WRITTEN APPROVAL.

AUTHORIZED SIGNATURE

CERTIFIED ISO 9001:2000

4148

INDUSTRIAL STEEL TREATING COMPANY, INC

501668

613 Carroll Street Jackson, MI 49202  
P.O. Box 98 Jackson MI, 49204  
Voice: 517-787-6312 Fax: 517-787-5441

HEAT TREAT CERTIFICATION

Customer:  
TECHNICAL STAMPING, INC.  
Attn:  
50600 E. RUSSELL SCHMIDT  
CHESTERFIELD, MI 48051

Certification Date:  
12/20/2007



Page: 1 of 1

Order Details

Part Number: F0114	Blue Print Rev: 1279
Packing Slip: 4444	Material Type: 1030 -1050
Purchase Order:	Quantity: 40,029
IST Order Number: 634940-1	Net Weight: 5,404.0
Lot Number: 1207-813	Part Desc: WASHER
Heat Number:	Comments: 4 TUB #401,712,100,523 1395,1528,1557,1610,1652 11117,13026,13377

SPECIFICATIONS

RESULTS

HRC 38 -45

HRC 40 -43

Approval:

Tom Levy - Quality Assurance Supervisor

Contact

Tom Levy - Quality Assurance Supervisor  
Voice: 517-780-9043 Fax: 517-787-5441  
E-Mail: tolevy@indstl.com

This Certification cannot be reproduced except in full, without written authorization from Industrial Steel Treating Company, LLC.

4148

501668

PAGE 1 of 1

\*\*\* W C I S T E E L \*\*\*  
 METALLURGICAL SERVICES INC.  
 1040 PINE AVE. SE  
 WARREN, OHIO 44483-6528

970001

MELTED AND MANUFACTURED IN USA

PURCHASE ORDER:  
 11/06/07 004139

SP

C E R T I F I C A T E  
 O F T E S T S

DATE/INVOICE: 11/28/07 690635314  
 WCI ORDER: 241 19 20017 02

SOLD TO:  
 SABRE STEEL INC  
 2368C RESEARCH DR  
 FARMINGTON HILLS MI 48335

SHIP TO:  
 SABRE STEEL INC  
 C/O VOSS STEEL  
 7925 BEECH DALY AVE  
 TAYLOR MI 48180

I certify that the properties of the items tested are true and accurate. Material was sampled, tested and inspected in accordance with the methods prescribed in the governing specifications. Subject material also conforms to the requirements of the governing specifications.  
 This report shall not be reproduced except in full.

D.H. Emanuele  
 President

*D.H. Emanuele*

All tests are conducted in-house unless noted with an asterisk.

Item	Specification and Description	
		03:15:34

HR SHEET HI-CARBON SAE-1050 AK FG  
 SPECIFIED HARDNESS NON-TEMPER ROLLED  
 REST THICK REST CHEM

2 .136M P008M000 X 37.000 ME X COILS  
 COIL WGT 30000MN/37000MX

HEAT-NO	COIL NUMBERS								
2141028	K925001								
HEAT-NO	C	MN	P	S	SI	CU	NI	CR	
2141028	.54	.75	.009	.002	.037	.03	.02	.05	
	MO	SN	AL	V	CB	B	TI	ZR	
	.01	.002	.047	.000	.000	.0000	.001		
	CA	CE	SE	H	N	O			
	.0001	.000	.000		.0029				

EU WASHER STOCK

TI 01 C R/A  
 INFO@SABRESTEEL.COM

CH C 50/55 MN 70/90 P 025MX S 010MX AK FINE GRAIN

501668

# ROGERS BROTHERS INC.



HOT DIP GALVANIZING

February 1, 2008

Technical Stamping  
50600 E. Russell Schmidt  
Chesterfield TWP, MI 48051

To Whom It May Concern:

This is to certify that the hot dip galvanizing of the following washers on your Purchase Order number 1522 conforms to specification ASTM A-153. The following sizes and lot numbers comply with the coating, workmanship, finish, and appearance requirements of ASTM F2329 specifications.

PIECES	PART# & SIZE	LOT NUMBER	AVERAGE ZINC COATING IN MILS.
267,768	RJ0058 5/8"	0108-842	3.31
23,767	RJ0100 1"	0108-845	5.13
55,463	F0058 5/8"	1106.425	4.55
105,726	F0078 7/8"	1207-834	3.44
50,368	F0078 7/8"	1207-816	3.05
31,132	F0114 1-1/4"	1207-813	2.95

This certification in no way implies anything other than the quality of our hot dip galvanizing as it pertains to your order.

Yours very truly,

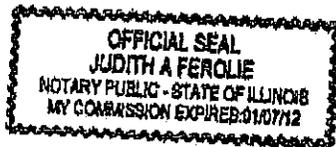
ROGERS BROTHERS INC.

*Lorraine P. Shelburne*

Lorraine P. Shelburne  
Vice President

SUBSCRIBED AND SWORN  
BEFORE ME THIS 1ST  
DAY OF JANUARY 2008, AD

*Judith A. Ferolie*  
NOTARY PUBLIC



4324

INDUSTRIAL STEEL TREATING COMPANY, INC

613 Carroll Street Jackson, MI 49202  
P.O. Box 98 Jackson MI, 49204  
Voice: 517-787-6312 Fax: 517-787-5441

502127

HEAT TREAT CERTIFICATION

Customer:  
TECHNICAL STAMPING, INC.  
Attn:  
50600 E. RUSSELL SCHMIDT  
CHESTERFIELD, MI 48051

Certification Date:  
05/07/2008  
Page: 1 of 1



Order Details

Part Number: F0200  
Packing Slip: 4512  
Purchase Order:  
IST Order Number: 694460-1  
Lot Number: 0508-023  
Heat Number: 2131928

Blue Print Rev: 1279  
Material Type: 1030 -1050  
Quantity: 3,496  
Net Weight: 1,346.0  
Part Desc: WASHER  
Comments: 1 TUB #820  
4319,4446,9039,2276,90012  
92759

SPECIFICATIONS

HRC 38 - 45

RESULTS

HRC 41 - 43

Approval:

Tom Levy - Quality Assurance Supervisor

Contact

Tom Levy - Quality Assurance Supervisor  
Voice: 517-780-9043 Fax: 517-787-5441  
E-Mail: tolevy@indstl.com

This Certification cannot be reproduced except in full, without written authorization from Industrial Steel Treating Company, LLC.

4329

502127

<p align="center">*** W C I S T E E L ***          METALLOGICAL SERVICES INC.          1040 PINE AVE. SE          WARREN, OHIO 44403-6528</p>		760602																																																																																																			
PAGE 1 of 1																																																																																																					
MELTED AND MANUFACTURED IN USA	PURCHASE ORDER: 01/11/08 004183-5																																																																																																				
CERTIFICATE OF TESTS	DATE/INVOICE: 03/19/08 690639653 WCI ORDER: 241 19 22227 01																																																																																																				
SOLD TO: SABRE STEEL INC 23680 RESEARCH DR FARMINGTON HILLS MI 48335	SHIP TO: SABRE STEEL INC C/O VOSS STEEL 7925 BEECH DALY AVE TAYLOR MI 48180																																																																																																				
<p>I certify that the properties of the items tested are true and accurate. Material was sampled, tested and inspected in accordance with the methods prescribed in the governing specifications. Subject material also conforms to the requirements of the governing specifications.          This report shall not be reproduced except in full.</p>		<p>D.H. Emanuele          President</p> 																																																																																																			
All tests are conducted in-house unless noted with an asterisk.																																																																																																					
Item	Specification and Description	03:15:28																																																																																																			
1	<p>HR SHEET HI-CARBON SAE-1050 AK FG          SPECIFIED HARDNESS NON-TEMPER ROLLED          REST THICK REST CHEM T/R</p> <p>.289M P010M000 X 39.300 ME X COILS          COIL WGT 30000MN/39000MX</p> <p align="center">COIL NUMBERS</p> <table border="0"> <tr> <td>HEAT-NO</td> <td>C</td> <td>MN</td> <td>P</td> <td>S</td> <td>SI</td> <td>CU</td> <td>NI</td> <td>CR</td> </tr> <tr> <td>2131928</td> <td>.53</td> <td>.79</td> <td>.014</td> <td>.003</td> <td>.037</td> <td>.05</td> <td>.03</td> <td>.06</td> </tr> <tr> <td>2142175</td> <td>.01</td> <td>.005</td> <td>.057</td> <td>.000</td> <td>.000</td> <td>.0000</td> <td>.001</td> <td>.00</td> </tr> <tr> <td></td> <td>CA</td> <td>CE</td> <td>SB</td> <td>H</td> <td>N</td> <td></td> <td></td> <td>ZR</td> </tr> <tr> <td></td> <td>.0018</td> <td>.000</td> <td>.002</td> <td></td> <td>.0036</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>C</td> <td>MN</td> <td>P</td> <td>S</td> <td>SI</td> <td>CU</td> <td>NI</td> <td>CR</td> </tr> <tr> <td>2142175</td> <td>.51</td> <td>.79</td> <td>.007</td> <td>.004</td> <td>.036</td> <td>.05</td> <td>.04</td> <td>.06</td> </tr> <tr> <td></td> <td>MO</td> <td>SN</td> <td>AL</td> <td>V</td> <td>CB</td> <td>B</td> <td>TI</td> <td>ZR</td> </tr> <tr> <td></td> <td>.01</td> <td>.005</td> <td>.048</td> <td>.000</td> <td>.000</td> <td>.0300</td> <td>.001</td> <td></td> </tr> <tr> <td></td> <td>CA</td> <td>CE</td> <td>SB</td> <td>H</td> <td>N</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>.0001</td> <td>.000</td> <td>.001</td> <td></td> <td>.0032</td> <td></td> <td></td> <td></td> </tr> </table> <p>ED WASHER STOCK</p> <p>TI 01 C R/A          INFPC@SABRESTEEL.COM</p> <p>CH C 50/55 MN 70/90 P 025MX S 010MX AK FINE GRAIN</p>	HEAT-NO	C	MN	P	S	SI	CU	NI	CR	2131928	.53	.79	.014	.003	.037	.05	.03	.06	2142175	.01	.005	.057	.000	.000	.0000	.001	.00		CA	CE	SB	H	N			ZR		.0018	.000	.002		.0036					C	MN	P	S	SI	CU	NI	CR	2142175	.51	.79	.007	.004	.036	.05	.04	.06		MO	SN	AL	V	CB	B	TI	ZR		.01	.005	.048	.000	.000	.0300	.001			CA	CE	SB	H	N					.0001	.000	.001		.0032				
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# ROGERS BROTHERS INC.

HOT DIP  
GALVANIZING

502127

July 18, 2008

Technical Stamping  
50600 E. Russell Schmidt  
Chesterfield TWP, MI 48051

To Whom It May Concern:

This is to certify that the hot dip galvanizing of the following washers on your Purchase Order number 1529 conforms to specification ASTM A-153. The following sizes and lot numbers comply with the coating, workmanship, finish, and appearance requirements of ASTM F2329 specifications.

<u>PIECES</u>	<u>PART# &amp; SIZE</u>	<u>LOT NUMBER</u>	<u>AVERAGE ZINC COATING IN MILS.</u>
39,272	BBW-S00 1-3/4"	0108-868	3.92
257,500	F0012 1/2"	0508-029	3.33
52,750	F0012 1/2"	0508-027	3.28
45,250	F0058 5/8"	0508-061	3.46
79,600	F0100 1"	0408-009	3.47
12,480	F0134 1-3/4"	0508-048	2.99
5,400	F0200 2"	0508-023	3.96
6,715	F0112 1-1/2"	0408-008	2.95
47,375	F0078 7/8"	0608-083	3.28
65,875	F0034 3/4"	0508-068	3.52

This certification in no way implies anything other than the quality of our hot dip galvanizing as it pertains to your order.

Yours very truly,

ROGERS BROTHERS INC.

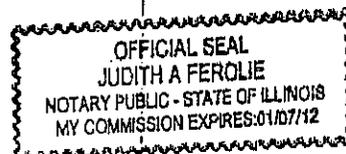
*Lorraine P. Shelburne*

Lorraine P. Shelburne  
Vice President

LPS:dl

SUBSCRIBED AND SWORN  
BEFORE ME THIS 18TH  
DAY OF JULY 2008, AD

*Judith A. Ferolie*  
NOTARY PUBLIC



# INSPECTION CERTIFICATE

**UNYRITE, INC.**



One Unyrite Drive  
Peru, Illinois 61354  
815-224-2221 — FAX# 815-224-3434

Customer	Specification	Size	Lot No.	Date
DALLAS FASTENER, INC. 1001 AVENUE M GRAND PRAIRIE, TEXAS 75049	ASTM A-563 GRADE DH HEAVY HEX NUT	H.D.G. 5/8-11 UNC 0.020" BLUE DYE	ACB21	Apr. 12, '06

Mechanical properties listed in accordance to ASTM F606/F606M, ASTM A370, ASTM E18

Mill Maker		Chemical Composition (%)											Heat Treatment				
		C	Si	Mn	P	S	Cu	Ni	Cr	Mo	Heat Treatment						
REP	CARBON	Spec.	0.20	0.55	0.60	0.040	0.050	-	-	-	-	-	-	-	-	-	-
	STEEL	Heat No.	0.21	0.23	0.70	0.011	0.009	0.01	0.02	1.00	0.18	-	-	-	-	-	-
<b>Mechanical Property Inspection</b>																	
Item	Proof Load	Cone Stripping	Hardness	Hardness	Absorbed Energy	Heat Treatment											
Spec	33,900	-	24-38			T: MIN. 800° F											
	lb	KN • kgf • lbf	.HAC	HAB • HB	J • kgm • ftlb	Q: FORGING Q (W.Q.)											
Results	Results	Results	27.5 27.4 27.8 29.0 29.0			T: 1004° F/45M. (M.C.)											
	GOOD		28.1			Q: Quenching T: Tempering ST: Solution Treatment											
Remarks:																	
" DH U"																	
Production Quantity 22,750 pcs.																	

Material used for the nut was melted and manufactured in the USA. The nut was manufactured in the USA to the above specification.  
We hereby certify that the material described has been manufactured and inspected satisfactorily with the requirement of the above specification.

Chief of Quality Assurance Section

UMC # 501418



REPUBLIC TECHNOLOGIES  
INTERNATIONAL  
LORAIN HOT ROLLED BAR PLANT  
1807 E 28th Street  
Lorain, OH 44055

REPUBLIC TECHNOLOGIES  
INTERNATIONAL, LORAIN HOT  
ROLLED BAR PLANT IS  
QS-9000 REGISTERED



In the Field of  
Chemical Testing  
Only Certificate  
0342.01 Valid to  
October 31, 2001

UMC # 501418

METALLURGICAL TEST REPORT

Sales Order No.: B116459	Delivery No. (BOL):	Vehicle ID(Carrier):	Purchase Order No.: 20421	P.O.Date: 12/28/1999
Mail To: 242038900 UNYTITE INC ATTN: JEFF DINELLI ONE UNYTITE DRIVE PERU,IL 61354-9710			Sold To: 242038000 UNYTITE INC ONE UNYTITE DRIVE PERU, IL 61354-9710 Ship To: 242038001 UNYTITE INC ONE UNYTITE DRIVE PERU, IL 61354-9710	

Specification (BC) C.187.23 MN.607.85 P.030 MAX S.030 MAX SL15/35 CU.30 MAX NI25 MAX CR.90/1.20 MO.15/30 FINE GRAIN COLD WORKING QUALITY PEEL & BURNISH REPORT JOMINY CLEANLINESS TENSILE FOR INFO ONLY	Customer Information 4120
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MATERIAL INFORMATION

Item No. Material No. Material Description  
000001 0013213 0.850"

Heat  
S01412

HEAT CHEMISTRY ANALYSIS

Type: Bloom cast

Elem	Result	UOM	J.Pt.
C	0.21	%	J-1
Mn	0.70	%	J-2
P	0.011	%	J-3
S	0.009	%	J-4
Si	0.23	%	J-5
Cu	0.010	%	J-6
Ni	0.02	%	J-7
Cr	1.00	%	J-8
Mo	0.179	%	J-9
Sb	0.001	%	J-10
Al	0.035	%	J-11
V	0.005	%	J-12
Co	0.001	%	J-13

Result	UOM
43	HRC
43	HRC
39	HRC
34	HRC
30	HRC
29	HRC
27	HRC
26	HRC
25	HRC
25	HRC
24	HRC
23	HRC
22	HRC
21	HRC
21	HRC

C,S,N Determined by methods defined in ASTM E1019-94.  
Pb and Bi Determined by methods defined in ASTM E485-95.  
All other elements determined by methods defined in ASTM E43-99.

Jominy hardenability determined by methods defined in ASTM A255-96.

DI VALUE

2.13 (Calculation utilizes 3 significant decimals for each element)

AUSTENITIC GRAIN SIZE \*

Austenitic Grain Size 5 or Finer Based on Total Aluminum equal to or greater than 0.020% per ASTM A29-93a.

END QUENCH HARDENABILITY TEST RESULTS \*

Austenitize Temperature 1700 degs. F  
Cool Test

JK CLEANLINESS - AVG RESULTS \*

AT	=	1.7
AH	=	0.0
BT	=	0.7
BH	=	0.0
CT	=	0.0
CH	=	0.0
DT	=	0.5
DH	=	0.0

Microcleanliness determined by methods defined in ASTM E45-97 Method A.

This is to certify that the product described herein was manufactured, sampled, tested and/or inspected in accordance with the specifications and quality requirements in such respect. The results in this report are applicable only to the items described herein and are correct as contained in the records of the company. Results indicated with an asterisk (\*) are not covered under the scope of accreditation. As also indicated by new asterisks (\*\*) were performed by a non accredited third party laboratory and are not certified by Republic Technologies International. Republic Technologies International certifies that this product was made and manufactured in the USA.  
Prepared by the office of James C. Cook, Director, Quality Assurance for Rolled Bar Division,  
date: 04/06/2000

This Report May Not Be Reproduced Except in Full  
UQS020 Rev A 2/1/99

*James C. Cook*



REPUBLIC TECHNOLOGIES  
INTERNATIONAL  
LORAIN HOT ROLLED BAR  
PLANT

REPUBLIC TECHNOLOGIES  
INTERNATIONAL LORAIN HOT  
ROLLED BAR PLANT IS  
OS-9000 REGISTERED



UML# 501418

Sales Order No.: 8116459	Delivery No. (BOL):	Vehicle ID(Carrier):	Purchase Order No.: 20421	P.O.Date: 12/28/1999
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**AS ROLLED TENSILE \***

Type	Min	Max	Avg. Ucm
Tensile Strength	103500	103500	103500 PSI
Elongation in 2"	27.0	27.0	27.0 %
Elongation in 8"	12.0	12.0	12.0 %
Reduction of Area	46.2	46.2	46.0 %

Mechanical properties determined by methods defined in ASTM E8-99 and ASTM A370-97a.

**REDUCTION RATIO**

277.25:1 Bloom Cast

This is to certify that the product described herein was manufactured, sampled, tested and/or inspected in accordance with the specifications and fitness requirements in each respect. The results in this report are applicable only to the items described herein and are correct at the time of the test. Results indicated with an asterisk (\*) are not covered under the scope of accreditation. Results indicated by two asterisks (\*\*) were performed by a non-accredited third party laboratory and are not certified by Republic Technologies International. Republic Technologies International certifies that this product was tested and manufactured in the USA.  
Prepared by the office of James C. Cash, Director, Quality Assurance Hot Rolled Bar Division.  
Date: 04/06/2000

This Report May Not Be Reproduced Except in Full  
UQ5020 Rev A 2/1/99

*James C. Cash*

UMC # 501418

Universal Galvanizing, Inc.  
107 Dillion Drive  
St. Peters, Missouri 63376  
(636) 970-2272

CERTIFICATE OF COMPLIANCE  
FOR HOT DIP GALVANIZING

CUSTOMER : Unytite, Inc.  
DATE : April 03, 2006  
ORDER NO : 35757  
LOT NO. : AC821  
ITEM : A563 DH HHN Nut  
SIZE : 5/8-11 0.031

WE HEREBY CERTIFY THAT THE ABOVE SIZE AND LOT  
NUMBER WHICH WAS HOT DIP GALVANIZED IN OUR PLANT  
MEET THE SPECIFICATIONS OF ASTM-A153 CLASS C.

AVERAGE THICKNESS OF ZINC COATING : 4.3 MILS

*David Gehris*  
David Gehris, QUALITY CONTROL

- Specializing in Hot Dip Galvanizing -



Quanex

502523

MacSteel

ONE JACKSON SQUARE  
SUITE 500  
JACKSON, MICHIGAN 49201

CERTIFIED MATERIAL TEST REPORT

CUSTOMER ORDER NUMBER P001787	CUSTOMER PART NUMBER B1045SC15625	HEAT NUMBER M25706	WORK ORDER NUMBER 210547 101	DATE 9/06/07
----------------------------------	--------------------------------------	-----------------------	---------------------------------	-----------------

REPORT TO  
TRACI  
UNYTITE, INC.  
  
ONE UNYTITE DRIVE  
  
PERU, IL 61354-9710

SHIP TO  
  
UNYTITE, INC.  
  
ONE UNYTITE DRIVE  
  
PERU, IL 61354

ORDERED

GRADE 1045	SIZE 1 9/16" RND	LENGTH 24' 10 1/2"
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CUSTOMER SPECIFICATIONS  
SAE 1045; ASTM E381-01

CHEMICAL ANALYSIS - (BAR AVERAGE)

C	Mn	P	S	Si	Ni	Cr	Mo	Cu	Sn	Al
0.46	0.81	0.010	0.033	0.26	0.05	0.11	0.02	0.12	0.006	0.003
V	Nb									
0.065	0.001									

GRAIN SIZE SPECIFICATION ASTM E112 FINE GRAIN 5-8

MACROCLEANLINESS SPECIFICATION ASTM E381

PLATE I PLATE II-

AVERAGE	S	R	C	NONE
1	1	1	1	

DECARB SPECIFICATION ASTM E1077

F TOTAL= 0.006

PAGE 1

We certify that these data are correct and in compliance with specified requirements.

MacSteel Monroe  
3000 East Front Street  
Monroe, MI 48161

*Chris Smith*  
Quality Assurance Representative

CONTINUED ON PAGE 2



Quanex

502523

MacSteel

ONE JACKSON SQUARE  
SUITE 500  
JACKSON, MICHIGAN 49201

CERTIFIED MATERIAL TEST REPORT

CUSTOMER ORDER NUMBER	CUSTOMER PART NUMBER	HEAT NUMBER	WORK ORDER NUMBER	DATE
P001787	BI045SC15625	M25706	210547 101	9/06/07

REPORT TO  
TRACI  
UNYTITE, INC.  
  
ONE UNYTITE DRIVE  
  
PERU , IL 61354-9710

SHIP TO  
UNYTITE, INC.  
  
ONE UNYTITE DRIVE  
  
PERU , IL 61354

ORDERED

GRADE	SIZE	LENGTH
1045	1 9/16" RND	24' 10 1/2"

SAE 1045; ASTM E381-01

REDUCTION RATIO

RATIO= 18.8 TO 1.0

\*\* MATERIAL 100% MELTED AND MANUFACTURED IN THE U.S.A. BY THE ELECTRIC ARC FURNACE AND CONTINUOUS CASTING METHOD. THE PRODUCT HAS NOT BEEN REPAIRED BY WELDING AND THIS MATERIAL HAS NOT BEEN EXPOSED TO MERCURY OR TO ANY OTHER METAL ALLOY THAT IS LIQUID AT AMBIENT TEMPERATURES DURING PROCESSING OR WHILE IN OUR POSSESSION. \*\*

PAGE 2 OF 2

We certify that these data are correct and in compliance with specified requirements.

MacSteel Monroe  
3000 East Front Street  
Monroe, MI 48161

  
Quality Assurance Representative

502523

# ROGERS BROTHERS INC.



HOT DIP GALVANIZING

September 25, 2007

Unytite, Inc.  
Unytite Quality Department  
One Unytite Drive  
Peru, IL 61354

To Whom It May Concern:

This is to certify that the hot dip galvanizing of the following material on your Purchase Order number 1995 conforms to specification ASTM A-153.

10 Containers	1-1/4" A563 DH HHN	Lot#KT031	3.80 Avg. Mils.
10 Containers	1-1/4" A563 DH HHN	Lot#KT041	3.52 Avg. Mils.

This certification in no way implies anything other than the quality of our hot dip galvanizing as it pertains to your order.

Yours very truly,

ROGERS BROTHERS INC.

*Lorraine P. Shelburne*

Lorraine P. Shelburne  
Vice President

SUBSCRIBED AND SWORN  
BEFORE ME THIS 25TH  
DAY OF SEPTEMBER 2007, AD

*Judith A. Ferolie*  
NOTARY PUBLIC

