

PO#17474

BC571A

# INSPECTION CERTIFICATE

**UNYRITE, INC.**

One Unyrite Drive  
Peru, Illinois 61354

815-224-2221 — FAX # 815-224-3434



Specification	Size	Quantity
ASTM F1852 Type 1 ASTM A563 Grade DH ASTM F436 Type 1	7/8 - 9 UNC X 2	23,425 pcs.

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

Date: NOV. 13, '06

**BOLT LOT NO.** BC571

Mechanical Property of Full Size Bolts	IDENTIFICATION	Chemical Composition %									
		C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100	Mo x 100	B x 10,000
<b>Tensile Strength</b> Load (lbf) Min. 55450 Max. 70125		30	15	60	Max. 40	Max. 50	-	-	-	-	-
Position of fracture (Length Method) HRC 34 MAX		52	30	60	40	50	-	-	-	-	-
Part of Screw ALL PASS	Heat No.	32	25	81	7	6	9	6	1	29	
Part of Screw 32.8	428740	32	25	81	7	6	9	6	1	29	

**NUT LOT NO.** BC182

Mechanical Property of Full Size Nuts	IDENTIFICATION	Chemical Composition %									
		C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100	Mo x 100	B x 10,000
<b>Hardness After 24 hr x 1000° F HRB</b> Min. 89 Max. 100		20	-	60	Max. 40	Max. 50	-	-	-	-	-
Proof Load (Lbf) 80850		55	-	60	40	50	-	-	-	-	-
Part of Nut ALL PASS	Heat No.	44	25	81	16	33	16	5	12	-	
1562	M21.468	44	25	81	16	33	16	5	12	-	

**WASHER LOT NO.** WB6901

Mechanical Property of Full Size Washers	IDENTIFICATION	Chemical Composition %									
		C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100	Mo x 100	B x 10,000
<b>Hardness (HRC)</b> Min. 38 Max. 45		-	-	-	Max. 40	Max. 50	-	-	-	-	-
Part of Washer ALL PASS		36	9	62	10	5	-	-	-	-	-
0.6	Heat No.	36	9	62	10	5	-	-	-	-	
0.6	0622888	36	9	62	10	5	-	-	-	-	

Material used for the bolt, nut and washer were melted & manufactured in the USA. The product was manufactured in the USA to ASTM specifications. The bolt and nut are manufactured by Unyrite. We hereby certify that the material described has been manufactured and inspected satisfactory with requirement of the above specification.

Thread Accuracy	REMARKS
Bolt ASME B1.1 Class 2A Nut ANSI B1.1 Class 2B	JEAN MARGHERIO OFFICIAL SEAL NOTARY PUBLIC - STATE OF ILLINOIS MY COMMISSION EXPIRES 10/1809 11-14-06

Chief of Quality Assurance Section

*[Signature]*

LOAD



# CHARTER STEEL

## CHARTER STEEL TEST REPORT Reverse Has Text And Codes

A Division of  
Charter Manufacturing Company, Inc.

1658 Cold Springs Road  
Saukville, Wisconsin 53080

(262) 268-2400

1-800-437-8789

FAX (262) 268-2570

UNYTITE, INC.  
ONE UNYTITE DRIVE  
PERU, IL 61354-  
Attn: ATTN: JEAN MARGHERIO

Cust. P.O.	29647
Cust Part#	C10B30SCO.856D
Charter Sales Order	177724
Heat #	428740
Ship Lot #	497113
Grade#	10B30 M SK FG RHQ
Process	DD
Finish Size	0.856

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed below and on the reverse side, and that it satisfies those requirements.

### Test Results of Heat Lot# 428740

Lab Code: 7388

Chemistry	C	MN	P	S	SI	NI	CR	MO	CU	SN	V
Wt%	0.32	0.81	0.007	0.006	0.250	0.06	0.06	0.01	0.09	0.005	0.001

	AL	N	B	TI	NB
	0.024	0.0060	0.0029	0.021	0.001

Jominy (HRC)	JOM01	JOM02	JOM03	JOM04	JOM05	JOM06	JOM07	JOM08	JOM09	JOM10	JOM11	JOM12
	53	52	52	48	31	24	23	22	22	22	21	20
	JOM13	JOM14	JOM15	JOM16	JOM18	JOM20	JOM22	JOM24	JOM26	JOM28	JOM30	JOM32
	0	0	0	0	0	0	0	0	0	0	0	0

JOMINY SAMPLE TYPE ENGLISH = R JOMINY LAB = 0358-01  
CHEM. DEVIATION EXT.-GREEN = N/R  
E45 INCLUSION LAB = 0358-02

Cleanliness	ASTM-E45 Method A			
	A	B	C	D
Thin	1.0	1.5	0.0	0.5
Heavy	0.0	0.0	0.0	0.0

### Test Results of Rolling Lot # 343228

QC DEVIATION EXT.-GREEN = N/R

	# of Tests	Test Results of Processing Lot # 497113			
		Min Value	Max Value	Mean Value	
TENSILE (KSI)	3	98.3	98.8	98.6	TENSILE LAB = 0358-02
REDUCTION OF AREA (%)	3	52	53	52	RA LAB = 0358-02
ROCKWELL B (HRBW)	3	91	93	92	RB LAB = 0358-02
WIRE SIZE (Inches)	6	0.854	0.855	0.855	
WIRE OUT OF ROUND (Inches)	6	0.000	0.000	0.000	

Specifications: Meets customer specifications with any applicable Charter Steel exceptions for the following customer documents:  
Customer Document = UNYTITE Revision = 5 Dated = 8-MAY-2003

Additional Comments:

Charter Steel  
Saukville, WI, USA



Tim Leahy  
Manager of Quality Assurance  
09/18/2006

Fax number: ( ) - Rem: Load1,Mail0,Fax0

The following statements are applicable to the material described on the front of this Test Report:

1. Except as noted, the steel supplied for this order was melted, rolled and processed in the United States.
2. Mercury was not used during the manufacture of this product; nor was the steel contaminated with mercury during processing.
3. Unless directed by the customer, there are no welds in any of the coils produced for this order.
4. The laboratory that generated the analytical or test results can be identified by the following key:

Certificate Number	Lab Code	Laboratory		Address
0358-01	7388	<b>CSMD</b>	Charter Steel Melting Division	1658 Cold Springs Road, Saukville, WI 53080
0358-02	8171	<b>CSR/ CSPD</b>	Charter Steel Rolling/ Processing Division	1658 Cold Springs Road, Saukville, WI 53080
0358-03	123633	<b>P4</b>	Charter Steel Ohio Processing Division	6255 US Highway 23, Risingsun, OH 43457
0358-04	125544	<b>CSC</b>	Charter Steel Cleveland	4300 E. 49 <sup>th</sup> St., Cuyahoga Heights, OH 44125-1004
*	*	—	Subcontracted test performed by laboratory not in Charter Steel system	

5. When run by a Charter Steel laboratory, the following tests were performed according to the latest revisions of the specifications listed below, as noted in the Charter Steel Laboratory Quality Manual:

Test	Possible Laboratory	Specification
Chemistry Analysis	CSMD	ASTM E415; ASTM E1019
Macroetch	CSMD	ASTM E381
Hardenability (Jominy)	CSMD	ASTM A255; JIS G0561
Grain Size	CSMD	ASTM E112
Tensile Test	CSR/ CSPD, P4, CSC	ASTM E8; ASTM A370
Rockwell Hardness	CSR/ CSPD, P4, CSC	ASTM E18; ASTM A370
Microstructure (spheroidization)	CSR/ CSPD, P4	ASTM A892
Cleanliness	CSR/ CSPD, CSC	ASTM E45

Charter Steel has been accredited to perform all of the above tests by the American Association for Laboratory Accreditation (A2LA). These accreditations expire 01/31/07.

All other test results associated with a Charter Steel laboratory that appear on the front of this report, if any, were performed according to documented procedures developed by Charter Steel and are not accredited by A2LA.

6. The test results on the front of this report are the true values measured on the samples taken from the production lot. They do not apply to any other sample.
7. This test report cannot be reproduced or distributed except in full without the written permission of Charter Steel. The primary customer whose name and address appear on the front of this form may reproduce this test report, subject to the following restrictions:
  - It may be distributed only to their customers
  - Both sides of all pages must be reproduced in full
8. This certification is given subject to the terms and conditions of sale provided in Charter Steel's acknowledgment (designated by our Purchase Order number) to the customer's purchase order. Both Purchase Order numbers appear on the front page of this Report.
9. Where the customer has provided a specification, the results on the front of this test report conform to that specification unless otherwise noted on this test report.



**CERTIFIED MATERIAL TEST REPORT**

<b>CUSTOMER ORDER NUMBER</b> P001013	<b>CUSTOMER PART NUMBER</b> B1045SC11250	<b>HEAT NUMBER</b> M21468	<b>WORK ORDER NUMBER</b> 201181 102	<b>DATE</b> 9/18/06
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**REPORT TO**  
TRACO  
UNYTITE, INC.  
  
ONE UNYTITE DRIVE  
  
PERU , IL 61354-9710

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

**ORDERED**

<b>GRADE</b> 1045	<b>SIZE</b> 1 1/8" RND	<b>LENGTH</b> 24' 10 1/2"
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**CUSTOMER SPECIFICATIONS**  
SAE 1045; ASTM E381-91

**CHEMICAL ANALYSIS - (BAR AVERAGE)**

C	Mn	P	S	Si	Ni	Cr	Mo	Cu	Sn	Al
0.44	0.81	0.016	0.033	0.25	0.05	0.12	0.02	0.16	0.007	0.004
V	Nb									
0.056	0.002									

**GRAIN SIZE** SPECIFICATION ASTM E112 FINE GRAIN 5-8

**MACROCLEANLINESS** SPECIFICATION ASTM E381

**PLATE I**

**PLATE II**

	S	R	C	
<b>AVERAGE</b>	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  
3000 East Front Street  
Monroe, MI 48161

MACSTEEL-JACKSON   
MACSTEEL-FT SMITH   
MACSTEEL-MONROE

  
Quality Assurance Representative

**CERTIFIED MATERIAL TEST REPORT**

CUSTOMER ORDER NUMBER	CUSTOMER PART NUMBER	HEAT NUMBER	WORK ORDER NUMBER	DATE
P001013	B1045SC11250	M21468	201181 102	9/18/06

REPORT TO  
TRACO  
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 1/8" RND	24' 10 1/2"

**CUSTOMER SPECIFICATIONS**

SAE 1045; ASTM E381-91

**REDUCTION RATIO**

RATIO= .36.2 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  
3000 East Front Street  
Monroe, MI 48161

MACSTEEL-JACKSON   
MACSTEEL-FT SMITH   
MACSTEEL-MONROE

  
Quality Assurance Representative

06-06-2005 15:45 GLOMAR STEEL CO. → 15867732298 NO: 727 - 0001  
 1SG BURNS HARBOR, INC. 0806-17028  
 TIME: 1330 BURNS HARBOR, IN 46304  
 REO. JOB, CONTRACT NO. PURCH. ORDER DATE PURCHASE ORDER NO. RELEASE  
 4/06/05 519641

DMSRATINGRENEG MILL ORDER NO.  
 EH017-25967

SOLD TO GLOMAR STEEL CO  
 64 MILL ST  
 ECORSE MI 48229  
 GLOMAR STEEL CO  
 64 MILL ST  
 ECORSE MI 48229  
 SHIP TO

FROM BURNS HARBOR, IN ROUTE LFDE LAFOND EXPRESS  
 DATE SHPD 05/05/05 FRT COLLECT

VEHICLE IDENTIFICATION NO. PCS/PKGS KIND OF PACKAGE, DESCRIPTION OF ARTICLES, SPECIAL MARKS AND EXCEPTIONS WEIGHT (POUNDS)  
 TRLR 901 1 COIL STEEL SHEETS 44990  
 DUNNAGE 10  
 FLAT-TARP COV

B26901

ITEM NO.	DESCRIPTION	P/C	QUANTITY SHIPPED
CP HT#	PCS LFT/COIL# PKGS		
	SPEC: (15002000005006000) (0000000)		
	COLD ROLLED FINISHED SPECIAL OIL COILS		
	COIL P		
	(2028-YYY-428)		
-0000-			
	.136 (MIN) X 43 X COIL	P	
01	843L61830 1 591268	1 9355'	44990
	(THEO LB 44171)		
HT#	C MN P S SI CU NI		
0622888	0.36 0.62 0.010 0.005 0.091 0.020 0.010		
	CR MO V TI AL CB N		
		0.074	
	B		

ATTN: JULEE  
 4 PAGES

melted and mfg in USA

1	1	358980-00	1	017	7	2182	140	X1
SHIP	SHIP	CUST	TERMS	DISY	PSD	ZONE	MKT	FOR

SHIPPER'S MILL ORDER COMPLETE

SHIPPING NOTICE

CAUTION - TO BE COVERED THROUGH SUPPLIER FOR ANY LOSS OR DAMAGE IN TRANSIT. CONSIGNEE MUST TAKE PROPER EXCEPTIONS AT TIME OF DELIVERY.

PO# 17510

JG541A

# INSPECTION CERTIFICATE

**UNYTITE, INC.**

One Unytite Drive  
Peru, Illinois 61354

815-224-2221 — FAX # 815-224-3434



SET LOT NO.

Specification	Size	Quantity
ASTM F1852 Type 1	3/4-10 UNC X 1-3/4	29,120 pcs.
ASTM A563 Grade DH		
ASTM F436 Type 1		

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

**BOLT LOT NO.** JG541

Date: Dec. 07, '06

	Mechanical Property of Full Size Bolts			Heat Treatment	IDENTIFICATION	Chemical Composition %											
	Tensile Strength	Proof Load	Hardness			C	Si	Mn	P	S	Cu	Ni	Cr	Mo	B		
Spec.	40100	28400	HRC 34 MAX	Quench Min. 800		30	15	60	Max. 40	Max. 50	-	-	-	-	-	-	-
Average	50000	ALL PASS	32.2	1580	446440	33	29	78	6	6	8	5	5	1	28		

**NUT LOT NO.** BC821

	Hardness (HRC)	Hardness After 24 hr x 1000° F HRB	Proof Load (Lbf)	Heat Treatment		IDENTIFICATION	Chemical Composition %										
				Quench	Temper		C	Si	Mn	P	S	Cu	Ni	Cr			
Spec.	24-38	HRB 89	58450	Min. 800	1193		20	-	60	Max. 40	Max. 50	-	-	-	-	-	-
Mean/5pcs.	28.6	—	ALL PASS	1562	1193	M22208	45	24	81	22	34	18	7	14			

**WASHER LOT NO.** WB8754

	Hardness (HRC)	IDENTIFICATION	Chemical Composition %									
			C	Si	Mn	P	S	Cu	Ni	Cr		
Spec.	38-45		-	-	-	Max. 40	Max. 50	-	-	-	-	-
Mean/5 Pcs.	42.5	9403080	37	7	72	8	4	-	-	-	-	-

Material used for the bolt, nut and washer were melted & manufactured in the USA. The product was manufactured in the USA to ASTM specifications. The bolt and nut are manufactured by Unytite. We hereby certify that the material described has been manufactured and inspected satisfactory with requirement of the above specification.

Thread Accuracy (Bolt & Nut)	
Bolt	ASME B1.1 Class 2A
Nut	ANSI B1.1 Class 2B

**REMARKS**

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

Chief of Quality Assurance Section

## LOAD


 CHARTER  
STEEL

# CHARTER STEEL

**CHARTER STEEL TEST REPORT**  
 Reverse Has Text And Codes

 A Division of  
 Charter Manufacturing Company, Inc.

 1658 Cold Springs Road  
 Saukville, Wisconsin 53080  
 (262) 268-2400  
 1-800-437-8789  
 FAX (262) 268-2570

**UNYTITE, INC.**  
**ONE UNYTITE DRIVE**  
**PERU, IL 61354-**  
**Attn: ATTEN: JEAN MARGHERIO**

Cust. P.O.	29646
Cust Part#	C10B30SC0.732D
Charter Sales Order	177723
Heat #	446440
Ship Lot #	500609
Grade#	10B30 M SK FG RHQ
Process	DD
Finish Size	0.732

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed below and on the reverse side, and that it satisfies those requirements.

**Test Results of Heat Lot# 446440**

Lab Code: 7388

Chemistry	C	MN	P	S	SI	NI	CR	MO	CU	SN	V
Wt%	0.33	0.78	0.006	0.006	0.290	0.05	0.05	0.01	0.08	0.007	0.001

	AL	N	B	TI	NB
	0.024	0.0070	0.0028	0.020	0.001

Jominy (HRC)	JOM01	JOM02	JOM03	JOM04	JOM05	JOM06	JOM07	JOM08	JOM09	JOM10	JOM11	JOM12
	55	53	52	50	34	25	24	23	22	22	21	21
Jominy (HRC)	JOM13	JOM14	JOM15	JOM16	JOM18	JOM20	JOM22	JOM24	JOM26	JOM28	JOM30	JOM32
	20	0	0	0	0	0	0	0	0	0	0	0

 JOMINY SAMPLE TYPE ENGLISH = R JOMINY LAB = 0358-01  
 CHEM. DEVIATION EXT.-GREEN = N/R  
 E45 INCLUSION LAB = 0358-02

Cleanliness

ASTM-E45 Method A

	A	B	C	D
Thin	0.5	1.5	0.0	0.5
Heavy	0.0	0.0	0.0	0.0

**Test Results of Rolling Lot # 351580**

QC DEVIATION EXT.-GREEN = N/R

**Test Results of Processing Lot # 500609**

	# of Tests	Min Value	Max Value	Mean Value	
TENSILE (KSI)	3	96.6	97.5	97.2	TENSILE LAB = 0358-02
REDUCTION OF AREA (%)	3	51	52	52	RA LAB = 0358-02
ROCKWELL B (HRBW)	3	90	92	91	RB LAB = 0358-02
WIRE SIZE (Inches)	3	0.731	0.731	0.731	
WIRE OUT OF ROUND (Inches)	3	0.000	0.000	0.000	

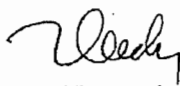
 QC DEVIATION EXT.-PROCESSED = N/R

Specifications:

 Meets customer specifications with any applicable Charter Steel exceptions for the following customer documents:  
 Customer Document = UNYTITE Revision = 5 Dated = 8-MAY-2003

Additional Comments:

 Charter Steel  
 Saukville, WI, USA

  
 Tim Leahy  
 Manager of Quality Assurance  
 11/03/2006

Fax number: ( ) - Rem: Load1,Mail0,Fax0



The following statements are applicable to the material described on the front of this Test Report:

1. Except as noted, the steel supplied for this order was melted, rolled and processed in the United States.
2. Mercury was not used during the manufacture of this product; nor was the steel contaminated with mercury during processing.
3. Unless directed by the customer, there are no welds in any of the coils produced for this order.
4. The laboratory that generated the analytical or test results can be identified by the following key:

Certificate Number	Lab Code	Laboratory		Address
0358-01	7388	<b>CSMD</b>	Charter Steel Melting Division	1658 Cold Springs Road, Saukville, WI 53080
0358-02	8171	<b>CSR/ CSPD</b>	Charter Steel Rolling/ Processing Division	1658 Cold Springs Road, Saukville, WI 53080
0358-03	123633	<b>P4</b>	Charter Steel Ohio Processing Division	6255 US Highway 23, Risingsun, OH 43457
0358-04	125544	<b>CSC</b>	Charter Steel Cleveland	4300 E. 49 <sup>th</sup> St., Cuyahoga Heights, OH 44125-1004
*	*	—	Subcontracted test performed by laboratory not in Charter Steel system	

5. When run by a Charter Steel laboratory, the following tests were performed according to the latest revisions of the specifications listed below, as noted in the Charter Steel Laboratory Quality Manual:

Test	Possible Laboratory	Specification
Chemistry Analysis	CSMD	ASTM E415; ASTM E1019
Macroetch	CSMD	ASTM E381
Hardenability (Jominy)	CSMD	ASTM A255; JIS G0561
Grain Size	CSMD	ASTM E112
Tensile Test	CSR/ CSPD, P4, CSC	ASTM E8; ASTM A370
Rockwell Hardness	CSR/ CSPD, P4, CSC	ASTM E18; ASTM A370
Microstructure (spheroidization)	CSR/ CSPD, P4	ASTM A892
Cleanliness	CSR/ CSPD, CSC	ASTM E45

Charter Steel has been accredited to perform all of the above tests by the American Association for Laboratory Accreditation (A2LA). These accreditations expire 01/31/07.

All other test results associated with a Charter Steel laboratory that appear on the front of this report, if any, were performed according to documented procedures developed by Charter Steel and are not accredited by A2LA.

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  - It may be distributed only to their customers
  - Both sides of all pages must be reproduced in full
8. This certification is given subject to the terms and conditions of sale provided in Charter Steel's acknowledgment (designated by our Purchase Order number) to the customer's purchase order. Both Purchase Order numbers appear on the front page of this Report.
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**CERTIFIED MATERIAL TEST REPORT**

<b>CUSTOMER ORDER NUMBER</b> P001071	<b>CUSTOMER PART NUMBER</b> B1045SC10000	<b>HEAT NUMBER</b> M22208	<b>WORK ORDER NUMBER</b> 202634 102	<b>DATE</b> 11/07/06
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**REPORT TO**  
TRACO  
UNYTITE, INC.

ONE UNYTITE DRIVE  
PERU , IL 61354-9710

**SHIP TO**

UNYTITE, INC.  
ONE UNYTITE DRIVE  
PERU , IL 61354

**ORDERED**

<b>GRADE</b> 1045	<b>SIZE</b> 1" RND	<b>LENGTH</b> 24' 10 1/2"
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**CUSTOMER SPECIFICATIONS**

SAE 1045; ASTM E381-91

**CHEMICAL ANALYSIS - (BAR AVERAGE)**

C	Mn	P	S	Si	Ni	Cr	Mo	Cu	Sn	Al
0.45	0.81	0.022	0.034	0.24	0.07	0.14	0.03	0.18	0.007	0.003
V	Nb									
0.055	0.002									

**GRAIN SIZE** SPECIFICATION ASTM E112 FINE GRAIN 5-8

**MACROCLEANLINESS** SPECIFICATION ASTM E381

PLATE I

PLATE II

	S	R	C	
AVERAGE	1	1	1	NONE

**DECARB** SPECIFICATION ASTM E1077

F TOTAL= 0.004

PAGE 1

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

MACSTEEL  
3000 East Front Street  
Monroe, MI 48161

MACSTEEL-JACKSON   
MACSTEEL-FT SMITH   
MACSTEEL-MONROE

  
Quality Assurance Representative

**CERTIFIED MATERIAL TEST REPORT**

CUSTOMER ORDER NUMBER	CUSTOMER PART NUMBER	HEAT NUMBER	WORK ORDER NUMBER	DATE
P001071	B1045SC10000	M22208	202634 102	11/07/06

REPORT TO  
TRACO  
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" RND	24' 10 1/2"

CUSTOMER SPECIFICATIONS  
SAE 1045; ASTM E381-91

REDUCTION RATIO

RATIO= 45.8 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. \*\*

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

MACSTEEL  
3000 East Front Street  
Monroe, MI 48161

MACSTEEL-JACKSON   
MACSTEEL-FT SMITH   
MACSTEEL-MONROE

  
Quality Assurance Representative

B8754



640 Lavoy Road  
Erie, MI 48133  
Phone: 734/848-2915 Fax: 734/848-8734

# CERTIFICATE OF ANALYSIS

CUSTOMER ORDER NO: 14543	CERTIFICATION NO: 2 -217419	SHIPPER NO: 2 -217419	CERTIFIED DATE: 10/18/06
CUSTOMER PART NO: P1480H01	RF	SIZE: .1220 <sub>x</sub> 5.5000 <sub>x</sub> COIL	GRADE: SAE J403 1040
CUSTOMER:  PRESTIGE STAMPING INC. **  P O BOX 1086  WARREN MI 480901086		CERTIFIED AND MANUFACTURED IN THE U.S.A.	

ATTENTION:

~~All units of measurement for chemistry are in weight percent.~~

COIL NO.	HEAT NUMBER	CHEMISTRY AND MECHANICAL PROPERTIES
KE7801	9403080	C = 0.370 MN= 0.720 P = 0.008 S = 0.004 SI= 0.070 AL= 0.047

## RECEIVED

OCT 19 2006

Time           

*[Signature]*  
Agent for Heidman Steel Products, Inc.

THE ABOVE MECHANICAL AND CHEMICAL ANALYSES WERE SUPPLIED  
BY THE PRODUCING MILL OR TESTED ON OUR OWN EQUIPMENT.  
Form No. FQC 001-Rev. 2

# HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17510

Invoice No. K08890

Invoice Date 01/03/07

Sales Order K08890

Cert No Inv Line No Item No

Quantity Lot No

Heat

Assembly No

Haydon PO

31037 70000 PTU075200

280 JJ871A

7327593

A47284

# INSPECTION CERTIFICATE

JJ871A

SET LOT NO.

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




Specification	Size	Quantity
ASTM F1852 Type 1 ASTM A563 Grade DH ASTM F436 Type 1	3/4-10 UNC X 2	28,983 pcs.

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

Date: Dec. 27, '06

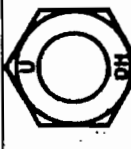
JJ871

BOLT LOT NO.

Mechanical Property of Full Size Bolts				Chemical Composition %											
Tensile Strength	Position of fracture	Proof Load (Lbf.)	Hardness	Heat Treatment		IDENTIFICATION									
				Quench	Temper	°F (°C)									
Min. 40100	Part of Screw	+/- 0.0005 in.	34 MAX	--	800	C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100	Mo x 100	B x 10,000
Average 50500	Part of Screw	ALL PASS	32.2	1580	869	30	15	52	30	Max. 40	Max. 50	--	--	--	--
						31	23	80	9	12	3	5	7	2	15

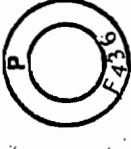
JJ581

NUT LOT NO.

Mechanical Property of Full Size Nuts				Chemical Composition %											
Hardness After 24 hr x 1000° F HRB	Proof Load (Lbf.)	Heat Treatment	IDENTIFICATION	°F (°C)											
				Quench	Temper	C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100		
Min. 24-38	58450	800	M22536	--	800	20	--	55	Max. 40	Max. 50	--	--	--	--	--
Spec. 28.7	ALL PASS	1289	1562	1580	869	45	24	80	7	28	18	8	12		
Mean/5pcs															

WB8949

WASHER LOT NO.

Mechanical Property of Full Size Washers				Chemical Composition %											
Hardness (HRC)	Proof Load (Lbf.)	Heat Treatment	IDENTIFICATION	°F (°C)											
				Quench	Temper	C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100		
Spec. 38-45	58450	800	B17013	--	800	--	--	--	Max. 40	Max. 50	--	--	--	--	--
Mean/5 Pcs. 41.9	ALL PASS	1289	1562	1580	869	43	18	76	7	1					

Material used for the bolt, nut and washer were melted & manufactured in the USA. The product was manufactured in the USA to ASTM specifications. The bolt and nut are manufactured by Unyrite. We hereby certify that the material described has been manufactured and inspected satisfactory with requirement of the above specification.

Chief of Quality Assurance Section



Thread Accuracy (Bolt & Nut)	
Bolt	ASME B1.1 Class 2A
Nut	ANSI B1.1 Class 2B

**REMARKS**  
 OFFICIAL SEAL  
 JEAN MARGHERIO  
 NOTARY PUBLIC - STATE OF ILLINOIS  
 MY COMMISSION EXPIRES: 10/18/09



1807 EAST 28TH ST.  
PHONE: 330-438-5694

LORAIN, OH 44055  
FAX: 330-438-5905

CERTIFICATE OF TESTS

REPUBLIC ENGINEERED PRODUCTS

August 11, 2006

PURCHASE ORD: 13764  
PART NUMBER: 3BC750U  
ORDER NUMBER: 0449628 - 01  
HEAT: 7327593

PURCHASE ORDER DATE: 1/25/2006  
ACCOUNT NUMBER: 5376-1348-01  
SCHEDULE: 1794-82  
REVISION: 1

PAGE 1 OF 2

CHARGE ADDRESS

SHIP TO

O & K AMERICAN  
4630 WEST 55TH ST  
CHICAGO, IL 60632

O & K AMERICAN  
MIKE PASEK  
4630 WEST 55TH ST  
CHICAGO, IL 60632

*09/15/2006*

MATERIAL DESCRIPTION

HOT ROLLED STEEL COILS CARBON O&K AMERICAN SPEC #OKA-009 PART #3BC750U REVISION 3 DTD 01/09/01 EXC  
CHEM, APPENDIX II (10B30M) GRADE-10B30-MOD FINE GRAIN COLD WORKING QUALITY FIXED PRACTICE PART  
RESTRICTED CHEMISTRY RESTRICTED MAX INCIDENTAL ELEMENTS  
SIZE: RDS .7500 DIAM X COIL  
RDS 19.0500MM DIAM X COIL

LADLE CHEMISTRY %

C	MN	P	S	SI	CU	NI	CR
0.31	0.80	0.009	0.012	0.23	0.03	0.05	0.07
V	MO	SN	AL	TI	B	CB	N
0.004	0.02	0.001	0.029	0.028	0.0015	0.001	0.0038

CALCULATED TESTS

REDUCTION RATIO 81.5 TO 1

ENITIC GRAIN SIZE 5 OR FINER BASED ON A TOTAL ALUMINUM CONTENT EQUAL TO OR GREATER THAN .020% PER  
ASTM A29.

SEMI - FINISHED RESULTS

JOMINY HARDNESS TEST SAE J406/ASTM A255  
1 2 3 4 5 6 7 8 9 10  
51 50 49 46 39 29 25 23 21 20

FINISHED SIZE RESULTS

DECARBURIZATION TEST SAE J419/ASTM E1077  
ETCHANT - NITAL MAGNIFICATION = 100X  
TOTAL  
COMPLETE DEPTH  
INCHES INCHES  
PCE 13684 0 0.003

NOTES

REPUBLIC ENGINEERED PRODUCTS HEREBY 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 HAS BEEN APPROVED FOR CONFORMANCE TO THE SPECIFICATIONS.

CERTIFICATE OF TESTS SHALL NOT BE REPRODUCED EXCEPT IN FULL.

ALL TESTING HAS BEEN PERFORMED USING THE CURRENT REVISION OF THE TESTING SPECIFICATIONS.

RECORDING OF FALSE, FICTITIOUS OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHED  
AS A FELONY UNDER FED STATUES TITLE 18 CHAPTER 47.

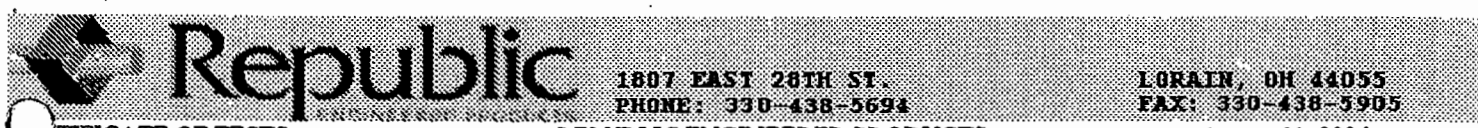
CHEMICAL ANALYSIS CONFORMS TO APPLICABLE SPECS: ASTM E415, ASTM E1019 AND/OR ASTM E1085.

THE MATERIAL WAS NOT EXPOSED TO MERCURY OR ANY METAL ALLOY THAT IS LIQUID AT AMBIENT TEMPERATURE  
DURING PROCESSING OR WHILE IN OUR POSSESSION.

A. SZELIGA  
MANAGER TECH. SERVICES

BY DEBRA L. BARTON

*A. Szeliga*



CERTIFICATE OF TESTS

REPUBLIC ENGINEERED PRODUCTS

August 11, 2006

PURCHASE ORD: 13764	PURCHASE ORDER DATE: 1/25/2006
PART NUMBER: 3BC750U	ACCOUNT NUMBER: 5376-1348-01
ORDER NUMBER: 0449628 - 01	SCHEDULE: 1794-82
HEAT: 7327593	REVISION: 1

PAGE 2 OF 2

NO WELD OR WELD REPAIR WAS PERFORMED ON THIS MATERIAL.

NOTES (CONTINUED)

MANUFACTURED IN THE U.S.A.

SOURCE INFORMATION

MELT SOURCE: LORAIN BILLET MELT COUNTRY: U.S.A HOT ROLL SOURCE: LORAIN 9/10, U.S.A  
 MELT METHOD: BILLET RED. RATIO: 81.5

END OF DATA

CC

END OF DATA

FAX SHIP TO. 1 COPY ATTENTION MIKE PASEK 17737674717  
 WITH SHIPMENT 1 COPY PRINTED AT SHIPPING AREA  
 FILE 1 COPY

A. SZELIGA  
 MANAGER TECH. SERVICES  
*R. A. Szeliga*

BY DEBRA L. BARTON



**CERTIFIED MATERIAL TEST REPORT**

<b>CUSTOMER ORDER NUMBER</b> P001168	<b>CUSTOMER PART NUMBER</b> B1045SC10000	<b>HEAT NUMBER</b> M22536	<b>WORK ORDER NUMBER</b> 203498 101	<b>DATE</b> 12/01/06
---	---	------------------------------	--	-------------------------

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

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

**ORDERED**

<b>GRADE</b> 1045	<b>SIZE</b> 1" RND	<b>LENGTH</b> 24' 10 1/2"
----------------------	-----------------------	------------------------------

**CUSTOMER SPECIFICATIONS**  
SAE 1045; ASTM E381-91

**CHEMICAL ANALYSIS - (BAR AVERAGE)**

C	Mn	P	S	Si	Ni	Cr	Mo	Cu	Sn	Al
0.45	0.80	0.007	0.028	0.24	0.08	0.12	0.04	0.18	0.008	0.003
V	Nb									
0.055	0.002									

**GRAIN SIZE** SPECIFICATION ASTM E112 FINE GRAIN 5-8

**MACROCLEANLINESS** SPECIFICATION ASTM E381

**PLATE I**

**PLATE II**

	S	R	C	
AVERAGE	1	1	1	NONE

**DECARB** SPECIFICATION ASTM E1077

F TOTAL= 0.004

PAGE 1

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

MACSTEEL  
3000 East Front Street  
Monroe, MI 48161

MACSTEEL-JACKSON   
MACSTEEL-FT SMITH   
MACSTEEL-MONROE

  
Quality Assurance Representative

**CERTIFIED MATERIAL TEST REPORT**

CUSTOMER ORDER NUMBER	CUSTOMER PART NUMBER	HEAT NUMBER	WORK ORDER NUMBER	DATE
P001168	B1045SC10000	M22536	203498 101	12/01/06

REPORT TO  
TRACO  
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" RND	24' 10 1/2"

**CUSTOMER SPECIFICATIONS**

SAE 1045; ASTM E381-91

REDUCTION RATIO .

RATIO= 45.8 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  
3000 East Front Street  
Monroe, MI 48161

MACSTEEL-JACKSON   
MACSTEEL-FT SMITH   
MACSTEEL-MONROE

  
Quality Assurance Representative

B 8949



640 Lavoy Road  
Erie, MI 48133  
Phone: 734/848-2915 Fax: 734/848-8734

# CERTIFICATE OF ANALYSIS

CUSTOMER ORDER NO: 14630	CERTIFICATION NO: 3 -219658	SHIPPER NO: 3 -219658	CERTIFIED DATE: 12/12/06
CUSTOMER PART NO: P1480H01	DH	SIZE: .1220 <sub>x</sub> 5.5000 <sub>x</sub>	COIL
CUSTOMER:  PRESTIGE STAMPING INC. **  P O BOX 1086  WARREN MI 480901086		GRADE: SAE J403 1040	
COILING SPECIFICATION: MELTED AND MANUFACTURED IN THE U.S.A.			

ATTENTION:

~~All units of measurement for chemistry are in weight percent.~~

COIL NO.	HEAT NUMBER	CHEMISTRY AND MECHANICAL PROPERTIES
KR0306	B17013	C = 0.430 MN= 0.760 P = 0.007 S = 0.001 SI= 0.180. AL= 0.023
KR0307	B17013	C = 0.430 MN= 0.760 P = 0.007 S = 0.001 SI= 0.180 AL= 0.023

DEC 13 2006

Time 8:00 AM OK

THE ABOVE MECHANICAL AND CHEMICAL ANALYSES WERE SUPPLIED BY THE PRODUCING MILL OR TESTED ON OUR OWN EQUIPMENT.  
Form No. FQC 001 Rev. 2

*[Handwritten Signature]*  
Agent for Heidtman Steel Products, Inc.

# HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17510

Invoice No. K08890 Invoice Date 01/03/07

Sales Order K08890

Cert No Inv Line No Item No

Quantity Lot No

Assembly No Haydon PO

30928 80000 PTU075225

270 JH781A

Heat 450160

A47782

JH781A

# INSPECTION CERTIFICATE

SET LOT NO.

**UNYTITE, INC.**  
One Unytite Drive  
Peru, Illinois 61354



815-224-2221 — FAX # 815-224-3434

Specification	Size	Quantity
ASTM F1852 Type 1	3/4-10 UNC X 2-1/4	36,131 pcs.
ASTM A563 Grade DH		
ASTM F436 Type 1		

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

**BOLT LOT NO.** JH781

Date: Dec. 14, '06

Mechanical Property of Full Size Bolts	Chemical Composition %																													
	Tensile Strength	Proof Load	Hardness	Heat Treatment		IDENTIFICATION					C		Si		Mn		P		S		Cu		Ni		Cr		Mo		B	
Load (lbf)	28400	(Length Method)	HRC	Quench	Temper						30		15		60		40		50		-		-		-		-		-	
Min.	40100	Max.	34 MAX	Min.	800	Heat No.					52		30		60		40		50		-		-		-		-		-	
Part of Screw	ALL PASS	+/- 0.0005 in.	31.5	1580	890	450160					31		27		84		7		8		10		5		5		1		28	
Part of Screw																														

**NUT LOT NO.** BD453

Mechanical Property of Full Size Nuts	Chemical Composition %																										
	Hardness	Proof Load	Heat Treatment	IDENTIFICATION		C					Si		Mn		P		S		Cu		Ni		Cr				
After 24 hr x 1000° F HRB	58450	(Lbf)	Quench	Temper						20		60		40		50		-		-		-		-			
Min.	HRB 89	Max.	Min.	800	Heat No.					55		60		40		50		-		-		-		-			
Spec.	24 - 38	ALL PASS	1562	1202	S77127					45		69		10		29		21		11		15		-			
Mean/5pcs	28.5																										

**WASHER LOT NO.** WB8754

Mechanical Property of Full Size Washers	Chemical Composition %																						
	Hardness	Proof Load	Heat Treatment	IDENTIFICATION		C					Si		Mn		P		S		Cu		Ni		Cr
After 24 hr x 1000° F HRB	9403080	(Lbf)	Quench	Temper						-		-		-		-		-		-		-	
Min.	38 - 45	Max.	Min.	800	Heat No.					-		-		-		-		-		-		-	
Spec.	42.5	ALL PASS	1562	1202	S77127					45		69		10		29		21		11		15	
Mean/5 Pcs.																							

Material used for the bolt, nut and washer were melted & manufactured in the USA. The product was manufactured in the USA to ASTM specifications. The bolt and nut are manufactured by Unytite. We hereby certify that the material described has been manufactured and inspected satisfactory with requirement of the above specification.

Chief of Quality Assurance Section

Thread Accuracy (Bolt & Nut)	REMARKS	
	Bolt	ASME B1.1 Class 2A
Nut	ANSI B1.1 Class 2B	

LOAD



# CHARTER STEEL

## CHARTER STEEL TEST REPORT Reverse Has Text And Codes

A Division of  
Charter Manufacturing Company, Inc.

1658 Cold Springs Road  
Saukville, Wisconsin 53080  
(262) 268-2400  
1-800-437-8789  
FAX (262) 268-2570

UNYTITE, INC.  
ONE UNYTITE DRIVE  
PERU, IL 61354-  
Attn: ATTEN: JEAN MARGHERIO

Cust. P.O.	29646
Cust Part#	C10B30SCO.732D
Charter Sales Order	177723
Heat #	450160
Ship Lot #	501644
Grade#	10B30 M SK FG RHQ
Process	DD
Finish Size	0.732

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed below and on the reverse side, and that it satisfies those requirements.

### Test Results of Heat Lot# 450160

Lab Code: 7388												
Chemistry	C	MN	P	S	SI	NI	CR	MO	CU	SN	V	
Wt%	0.31	0.84	0.007	0.008	0.270	0.05	0.05	0.01	0.10	0.007	0.001	
	AL	N	B	TI	NB							
	0.023	0.0060	0.0028	0.021	0.001							
Jominy (HRC)	JOM01	JOM02	JOM03	JOM04	JOM05	JOM06	JOM07	JOM08	JOM09	JOM10	JOM11	JOM12
	53	52	51	49	36	25	22	22	21	21	20	20
	JOM13	JOM14	JOM15	JOM16	JOM18	JOM20	JOM22	JOM24	JOM26	JOM28	JOM30	JOM32
	0	0	0	0	0	0	0	0	0	0	0	0

JOMINY SAMPLE TYPE ENGLISH = R JOMINY LAB = 0358-01  
CHEM. DEVIATION EXT.-GREEN = N/R  
E45 INCLUSION LAB = 0358-02

Cleanliness	ASTM-E45 Method A			
	A	B	C	D
Thin	0.5	1.5	0.0	0.5
Heavy	0.0	0.0	0.0	0.0

### Test Results of Rolling Lot # 352876

QC DEVIATION EXT.-GREEN = N/R

### Test Results of Processing Lot # 501644

	# of Tests	Min Value	Max Value	Mean Value	
TENSILE (KSI)	3	95.4	97.2	96.4	TENSILE LAB = 0358-02
REDUCTION OF AREA (%)	3	53	55	54	RA LAB = 0358-02
ROCKWELL B (HRBW)	3	88	88	88	RB LAB = 0358-02
WIRE SIZE (Inches)	41	0.731	0.732	0.731	
WIRE OUT OF ROUND (Inches)	41	0.000	0.000	0.000	
QC DEVIATION EXT.-PROCESSED = N/R					

Specifications: Meets customer specifications with any applicable Charter Steel exceptions for the following customer documents:  
Customer Document = UNYTITE Revision = 5 Dated = 8-MAY-2003

Additional Comments:

Charter Steel  
Saukville, WI, USA



Tim Leahy  
Manager of Quality Assurance  
11/15/2006

Fax number: ( ) - Rem: Load1,Mail0,Fax0

The following statements are applicable to the material described on the front of this Test Report:

1. Except as noted, the steel supplied for this order was melted, rolled and processed in the United States.
2. Mercury was not used during the manufacture of this product; nor was the steel contaminated with mercury during processing.
3. Unless directed by the customer, there are no welds in any of the coils produced for this order.
4. The laboratory that generated the analytical or test results can be identified by the following key:

Certificate Number	Lab Code	Laboratory		Address
0358-01	7388	<b>CSMD</b>	Charter Steel Melting Division	1658 Cold Springs Road, Saukville, WI 53080
0358-02	8171	<b>CSR/D/CSPD</b>	Charter Steel Rolling/Processing Division	1658 Cold Springs Road, Saukville, WI 53080
0358-03	123633	<b>P4</b>	Charter Steel Ohio Processing Division	6255 US Highway 23, Risingsun, OH 43457
0358-04	125544	<b>CSC</b>	Charter Steel Cleveland	4300 E. 49 <sup>th</sup> St., Cuyahoga Heights, OH 44125-1004
*	*	--	Subcontracted test performed by laboratory not in Charter Steel system	

5. When run by a Charter Steel laboratory, the following tests were performed according to the latest revisions of the specifications listed below, as noted in the Charter Steel Laboratory Quality Manual:

Test	Possible Laboratory	Specification
Chemistry Analysis	CSMD	ASTM E415; ASTM E1019
Macroetch	CSMD	ASTM E381
Hardenability (Jominy)	CSMD	ASTM A255; JIS G0561
Grain Size	CSMD	ASTM E112
Tensile Test	CSR/D/CSPD, P4, CSC	ASTM E8; ASTM A370
Rockwell Hardness	CSR/D/CSPD, P4, CSC	ASTM E18; ASTM A370
Microstructure (spheroidization)	CSR/D/CSPD, P4	ASTM A892
Cleanliness	CSR/D/CSPD, CSC	ASTM E45

Charter Steel has been accredited to perform all of the above tests by the American Association for Laboratory Accreditation (A2LA). These accreditations expire 01/31/07.

All other test results associated with a Charter Steel laboratory that appear on the front of this report, if any, were performed according to documented procedures developed by Charter Steel and are not accredited by A2LA.

6. The test results on the front of this report are the true values measured on the samples taken from the production lot. They do not apply to any other sample.
7. This test report cannot be reproduced or distributed except in full without the written permission of Charter Steel. The primary customer whose name and address appear on the front of this form may reproduce this test report, subject to the following restrictions:
  - It may be distributed only to their customers
  - Both sides of all pages must be reproduced in full
8. This certification is given subject to the terms and conditions of sale provided in Charter Steel's acknowledgment (designated by our Purchase Order number) to the customer's purchase order. Both Purchase Order numbers appear on the front page of this Report.
9. Where the customer has provided a specification, the results on the front of this test report conform to that specification unless otherwise noted on this test report.





ST PAUL STEEL MILL  
1678 RED ROCK ROAD  
ST PAUL, MN 55119 USA  
(651) 731-5600

Chemical and Physical Test Report  
MADE IN UNITED STATES

M-033913

PRODUCED IN: ST PAUL

SHIP TO UNYTITE INC 1 UNYTITE DRIVE PERU, IL 61354	INVOICE TO UNYTITE INC 1 UNYTITE DRIVE PERU, IL 61354	SHIP DATE 11/14/06	CUST. ACCOUNT NO 70000042
---	--	-----------------------	------------------------------

SHAPE + SIZE R158Q	GRADE C1045M23F	SPECIFICATION A576-90B(2000), A29/A29M-05	SALES ORDER 6072000-02	CUST P.O. NUMBER P001012-02
HEAT I.D. S77127	C Mn P S Si Cu Ni Cr Mo V Nb N Sn Al Ti Ca Co	.45 .69 .010 .029 .21 .21 .11 .15 .050 .024 .002 .0093 .019 .002 .00260 .00160 .010		

Mechanical Test: Red R 38.5 Std Dev'd Idl Diam: 1.513  
Cleanliness Test

VENDOR HEAT S77127, ROLL LOT M627511, QUALITY PROGRAM MANUAL REV. 1, DTD 6/10/05, FG(5-8)

Grain Test: Fine Grain Size Units 5.0

J1	J2	J3	J4	J6	J7	J8	J9	J10	J12	J14	J16	J18	J20	J24	J28	J32
58	55	49	37	27	26	25	24	23	21	20	19	18	17	16	15	15

Customer Requirements SOURCE: MINNESOTA BILLETS CASTING: STRAND CAST  
CUST ITEM NUMBER: B1045SC1.0000

*Debra L. Kariesch*



This material, including the billets, was produced and manufactured in the United States of America

Bhaskar Yalamanchilli  
Quality Director  
Gerdau Ameristeel

*Bhaskar Yalamanchilli*

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

Mgr. Metallurg. Svcs.  
ST PAUL STEEL MILL

Seller warrants that all material furnished shall comply with specifications subject to standard published manufacturing variations. NO OTHER WARRANTIES, EXPRESSED OR IMPLIED, ARE MADE BY THE SELLER, AND SPECIFICALLY EXCLUDED ARE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. In no event shall seller be liable for indirect, consequential or punitive damages arising out of or related to the materials furnished by seller. Any claim for damages for materials that do not conform to specifications must be made from buyer to seller immediately after delivery of same in order to allow the seller the opportunity to inspect the material in question.





**GERDAU AMERISTEEL™**

**Lead and Mercury Content of Steel**

Lead and mercury are not purposefully introduced in the Gerdau Ameristeel steel manufacturing process, and are not present at levels that would require disclosure on Material Safety Data Sheets. To the best of our knowledge, no mercury is present in our steel products.

Sincerely,

Gerdau Ameristeel

A. James Turner  
Director, Environment & Quality



**GERDAU AMERISTEEL™**

**Weld Repair of Finished Product**

We hereby certify that weld repair of finished products is not performed at Gerda Ameristeel.

Sincerely,

Gerda Ameristeel

A. James Turner  
Director, Environment & Quality

B8754-



640 Lavoy Road  
Erie, MI 48133  
Phone: 734/848-2915 Fax: 734/848-8734

# CERTIFICATE OF ANALYSIS

CUSTOMER ORDER NO: 14543	CERTIFICATION NO: 2 -217419	SHIPPER NO: 2 -217419	CERTIFIED DATE: 10/18/06
CUSTOMER PART NO: P1480H01	RF	SIZE: .1220 <sub>x</sub> 5.5000 <sub>x</sub> COIL	
CUSTOMER:  PRESTIGE STAMPING INC. **  P O BOX 1086  WARREN MI 480901086		GRADE: SAE J403 1040	
CERTIFIED AND MANUFACTURED IN THE U.S.A.			

ATTENTION:

~~All units of measurement for chemistry are in weight percent.~~

COIL NO.	HEAT NUMBER	CHEMISTRY AND MECHANICAL PROPERTIES
KE7801	9403080	C = 0.370 MN= 0.720 P = 0.008 S = 0.004 SI= 0.070 AL= 0.047

## RECEIVED

OCT 19 2006

Time           

Agent for Heidman Steel Products, Inc.

THE ABOVE MECHANICAL AND CHEMICAL ANALYSES WERE SUPPLIED BY THE PRODUCING MILL OR TESTED ON OUR OWN EQUIPMENT.  
Form No. FQC 001 Rev 2

PO#17528

RECEIVED

JAN 17 2007

AMERICAN STEEL

**Cert Summary Page HAYDON BOLTS, INC.**

AMERICAN STEEL FABRICATORS INC      Customer PO 17528      Haydon PO  
 Invoice No. B7010227      Invoice Date 01/05/07      Sales Order K08981  
 Cert No Inv Line No Item No      Quantity Lot No      Heat      Assembly No

15659	40000	AFA125400	20	171093A	NU 819025	A40645
	Description: 1-1/4(7)X 4" A490-1 BOLT      Manufacturer: NUCOR FASTENER DIV.					
9396	50000	AFA125375	15	148364A	NU 713635	A38224
	Description: 1-1/4(7)X 3-3/4 A490-1 BOLT      Manufacturer: NUCOR FASTENER DIV.					
8111	60000	AFA125350	10	0001-20188	C25519	HAYDON
	Description: 1-1/4(7)X 3-1/2 A490-1 BOLT      Manufacturer: INFASCO					
29694	70000	VDH125	45	AW961	S73913	A44773
	Description: 1-1/4(7) HVY HEX NUT A563-DH      Manufacturer: UNYTITE INC.					
30739	80000	AAW125	45	212614	167418	A45484
	Description: 1-1/4 F436-1 STRUCTURAL WASHER      Manufacturer: WROUGHT WASHER MFG INC.					
29568	100000	PTF113375	10	AV871A	423860	A44772
	Description: 1-1/8(7)X 3-3/4 F2280/A490-1 TC BOLT DOMESTIC      Manufacturer: UNYTITE INC.					
30219	110000	PTF100425	20	AT481A	425870	A44772
	Description: 1(8)X 4-1/4 F2280/A490-1 TC BOLT DOMESTIC      Manufacturer: UNYTITE INC.					
29250	120000	PTF100400	20	AQ031A	418210	A43578
	Description: 1(8)X 4" F2280/A490-1 TC BOLT DOMESTIC      Manufacturer: UNYTITE INC.					
29661	130000	PTF100375	45	AV781A	425870	A44772
	Description: 1(8)X 3-3/4 F2280/A490-1 TC BOLT DOMESTIC      Manufacturer: UNYTITE INC.					
30218	140000	PTF100350	70	BB021A	418210	A44772
	Description: 1(8)X 3-1/2 F2280/A490-1 TC BOLT DOMESTIC      Manufacturer: UNYTITE INC.					
29082	150000	PTF100325	10	AT471B	418210	A43578
	Description: 1(8)X 3-1/4 F2280/A490-1 TC BOLT DOMESTIC      Manufacturer: UNYTITE INC.					

# Cert Summary Page HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17528

Invoice No. B7010227 Invoice Date 01/05/07 Sales Order K08981

Cert No Inv Line No Item No Quantity Lot No Heat Assembly No Haydon PO

29944	16000	PTF100300	20	AM311A	411390	PS01888
	Description: 1(8)X 3" F2280/A490-1 TC BOLT DOMESTIC Manufacturer: ST. LOUIS SCREW & BOLT					
30217	17000	PTF100275	35	AZ991A	418910	A44772
	Description: 1(8)X 2-3/4 F2280/A490-1 TC BOLT DOMESTIC Manufacturer: UNYTITE INC.					
30819	19000	PTU087200	10	BC571A	428740	A47284
	Description: 7/8(9)X 2" F1852-1/A325 PT DOMESTIC Manufacturer: UNYTITE INC.					
30827	21000	PTU075275	90	BB361A	442360	A47284
	Description: 3/4(10)X 2-3/4 F1852-1/A325 PT DOMESTIC Manufacturer: UNYTITE INC.					
30987	22000	PTU075250	190	JH841A	450150	A47284
	Description: 3/4(10)X 2-1/2 F1852-1/A325 PT DOMESTIC Manufacturer: UNYTITE INC.					
30928	23000	PTU075225	280	JH781A	450160	A47782
	Description: 3/4(10)X 2-1/4 F1852-1/A325 PT DOMESTIC Manufacturer: UNYTITE INC.					
30993	24000	PTU075200	190	JK551A	452780	A47284
	Description: 3/4(10)X 2" F1852-1/A325 PT DOMESTIC Manufacturer: UNYTITE INC.					
30898	25000	PTU075175	725	BC832A	7327593	A47284
	Description: 3/4(10)X 1-3/4 F1852-1/A325 PT DOMESTIC Manufacturer: UNYTITE INC.					
22600	27000	HBA076100	5	C OF C		A42388
	Description: 3/4(10)X 11" HEX BOLT A307A Manufacturer: HEADS & THREADS INT'L LLC					
22576	280000	HBA075900	5	C OF C		A42387
	Description: 3/4(10)X 9" LC HEX CAP SCREW Manufacturer: STELFAST FASTENERS INC.					
22574	290000	HBA075800	5	C OF C		A42387
	Description: 3/4(10)X 8" LC HEX CAP SCREW Manufacturer: STELFAST FASTENERS INC.					

# Cert Summary Page HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17528

Invoice No. B7010227 Invoice Date 01/05/07 Sales Order K08981

Cert No Inv Line No Item No Quantity Lot No Heat Assembly No Haydon PO

23252 300000 HBA075700 10 C OF C C OF C A43413

Description: 3/4(10)X 7" LC HEX CAP SCREW Manufacturer: STELFAST FASTENERS INC.

24301 310000 HNA075 25 C OF C C OF C A43770

Description: 3/4(10) HEX NUT A563A Manufacturer: STELFAST FASTENERS INC.

30726 320000 WFA075 25 C OF C C OF C A45586

Description: 3/4 FLAT ROUND WASHER F844 Manufacturer: COATESVILLE WASHER CO.

30663 350000 AAA075200 100 027600 738658 A47580

Description: 3/4(10)X 2" A325-1 BOLT Manufacturer: ST. LOUIS SCREW & BOLT

29963 360000 VUC075 100 06-38-026 419430 A46111

Description: 3/4(10) HVY HEX NUT A563-C DOMESTIC Manufacturer: DECKER MANUFACTURING CORP.

# HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17528

Invoice No. B7010227

Invoice Date 01/05/07

Sales Order K08981

Cert No 15659

Inv Line No 40000

Item No AFA125400

Quantity 20

Lot No 171093A

Heat NU 819025

Assembly No

Haydon PO

A40645

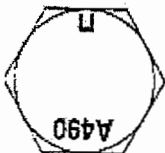
**NUCOR**

LOT NO. 171093A

Post Office Box 6100  
Saint Joe, Indiana 46785  
Telephone 260/337-1600

**FASTENER DIVISION**

CUSTOMER NO/NAME  
554 HAYDON BOLTS INC  
TEST REPORT SERIAL# FB217628  
TEST REPORT ISSUE DATE 9/25/03  
DATE SHIPPED 10/01/03  
CUSTOMER P.O. # A 40645  
NAME OF LAB SAMPLER: FRANKLIN A. NEAL, LAB TECHNICIAN  
\*\*\*\*\*CERTIFIED MATERIAL TEST REPORT\*\*\*\*\*  
NUCOR PART NO QUANTITY LOT NO. DESCRIPTION  
188140 900 171093A 1 1/4-7 X 4 A490 HAY HX  
MANUFACTURE DATE 9/11/03  
STRUC SCREEN PLAIN



MATERIAL GRADE -A158MLV

---CHEMISTRY  
MATERIAL HEAT NUMBER  
RH020299 NU 819025  
C MN P S SI CR MO V  
.34 .88 .011 .018 .24 .95 .19 .020  
AZLA NO: 780.01 EXP: 2004-11-30  
FOR CHEMICAL TESTING

---MECHANICAL PROPERTIES IN ACCORDANCE WITH ASTM A490-02

SURFACE CORE PROOF LOAD TENSILE STRENGTH  
HARDNESS (RC) 116300 LBS  
HARDNESS (R30N) (LBS)  
N/A 35.5 PASS 164531 167795  
N/A 36.4 PASS 162827 168036  
N/A 35.3  
AVERAGE VALUES FROM TESTS PRODUCTION LOT SIZE 950 PCS 168916  
35.7 163679 168916  
---MET MAGNETIC PARTICLE INSPECTION IN ACCORDANCE WITH ASTM A490 80 PCS. SAMPLED LOT PASSED

---MICROHARDNESS TEST RESULT IN ACCORDANCE WITH SAE J121(HKN)

POSITION 1 376 2 387 3 376  
CARBURIZATION/DECARBURIZATION TEST IN ACCORDANCE WITH A490 - LOT PASSED  
HEAT TREATMENT - AUSTENITIZED, OIL QUENCHED & TEMPERED (MIN 800 DEG F)

---DIMENSIONS PER ASME B18.2.6-1996

CHARACTERISTIC #SAMPLES TESTED  
Width across corners 2 2.2680 2.2700  
Crip length 2 1.8630 1.8960  
Head Height 2 0.7800 0.7860  
Threads 2 PASS

ALL TESTS ARE IN ACCORDANCE WITH THE LATEST REVISIONS OF THE METHODS PRESCRIBED IN THE APPLICABLE SAE AND ASTM SPECIFICATIONS. THE SAMPLES TESTED CONFORM TO THE SPECIFICATIONS AS DESCRIBED/LISTED ABOVE AND WERE MANUFACTURED FREE OF MERCURY CONTAMINATION.  
THE STEEL WAS MELTED AND MANUFACTURED IN THE U.S.A. AND THE PRODUCT WAS MANUFACTURED AND TESTED IN THE U.S.A. OUR TESTING LABORATORY. THIS CERTIFIED MATERIAL TEST REPORT RELATES ONLY TO THE ITEMS LISTED ON THIS DOCUMENT AND MAY NOT BE REPRODUCED EXCEPT IN FULL.

NUCOR FASTENER  
A DIVISION OF NUCOR CORPORATION

*Morton Schaffer*  
MORTON SCHAFER  
QUALITY ASSURANCE SUPERVISOR



MECHANICAL FASTENER  
CERTIFICATE NO. AZLA 139-01  
EXPIRATION DATE 12/31/03



# HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17528

Invoice No. B7010227

Invoice Date 01/05/07

Sales Order K08981

Cert No Inv Line No Item No

Quantity Lot No

Assembly No

Haydon PO

9396 50000 AFA125375

15 148364A

Heat  
NU 713635

A38224

# NUCOR

LOT NO.  
148364A

Post Office Box 5100  
Saint Joe, Indiana 46785  
Telephone 260/337-1600

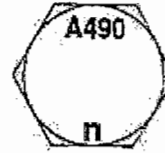
## FASTENER DIVISION

CUSTOMER NO/NAME  
354 HAYDON BOLTS INC

TEST REPORT SERIAL# FB188100 NUCOR ORDER # 451548  
 TEST REPORT ISSUE DATE 2/04/02 CUST PART #  
 DATE SHIPPED 9/24/02 CUSTOMER P.O. # A38224  
 NAME OF LAB SAMPLER: JACK H. MILLER, LAB TECHNICIAN

\*\*\*\*\*CERTIFIED MATERIAL TEST REPORT\*\*\*\*\*

NUCOR PART NO QUANTITY LOT NO. DESCRIPTION  
 168130 440 148364A 1 1/4-7 X 3 3/4 A490 HVY HX  
 MANUFACTURE DATE 1/21/02 STRUC SCREW PLAIN



---CHEMISTRY MATERIAL GRADE -4135MLV

MATERIAL NUMBER	HEAT NUMBER	**CHEMISTRY COMPOSITION (WT% HEAT ANALYSIS) BY MATERIAL SUPPLIER							
		C	MN	P	S	SI	CR	MO	V
RH019490	NU 713635	.34	.86	.006	.011	.22	.94	.19	.020
	MIN	.30							
	MAX	.48		.040	.040				

NUCOR STEEL - NEBRASKA  
 A2LA NO: 780.01 EXP: 2002-11-30  
 FOR CHEMICAL TESTING

---MECHANICAL PROPERTIES IN ACCORDANCE WITH ASTM A490-00

SURFACE HARDNESS (R30N)	CORE HARDNESS (RC)	PROOF LOAD 116300 LBS	TENSILE STRENGTH 6 DEG WEDGE (LBS)	STRESS (PSI)
N/A	35.9	PASS	159160	164252
N/A	34.2	PASS	159660	164768
N/A	33.4		157918	162970
N/A	35.1		161470	166636
N/A	34.0		159420	164520
N/A	35.2		159767	164878
N/A	32.0		159030	164118
N/A	33.6		157557	162598
AVERAGE VALUES FROM TESTS		PRODUCTION LOT SIZE	8050 PCS	
	34.2	159248	164343	

---WET MAGNETIC PARTICLE INSPECTION IN ACCORDANCE WITH ASTM A490 200 PCS. SAMPLED LOT PASSED

---MICROHARDNESS TEST RESULT IN ACCORDANCE WITH SAE J121(HKN)

POSITION 1. 323 2. 389 3.

CARBURIZATION/DECARBURIZATION TEST IN ACCORDANCE WITH A490 - LOT PASSED

HEAT TREATMENT - AUSTENITIZED, OIL QUENCHED & TEMPERED (MIN 800 DEG F)

---DIMENSIONS PER ASME B18.2.6-1996

CHARACTERISTIC	#SAMPLES TESTED	MINIMUM	MAXIMUM
Width Across Corners	8	2.2660	2.2740
Grip Length	8	1.6690	1.6060
Head Height	8	0.7650	0.7770
Threads	8	PASS	PASS

ALL TESTS ARE IN ACCORDANCE WITH THE LATEST REVISIONS OF THE METHODS PRESCRIBED IN THE APPLICABLE SAE AND ASTM SPECIFICATIONS. THE SAMPLES TESTED CONFORM TO THE SPECIFICATIONS AS DESCRIBED/LISTED ABOVE AND WERE MANUFACTURED FREE OF MERCURY CONTAMINATION. THE STEEL WAS MELTED AND MANUFACTURED IN THE U.S.A. AND THE PRODUCT WAS MANUFACTURED AND TESTED IN THE U.S.A. WE CERTIFY THAT THIS DATA IS A TRUE REPRESENTATION OF INFORMATION PROVIDED BY THE MATERIAL SUPPLIER AND OUR TESTING LABORATORY. THIS CERTIFIED MATERIAL TEST REPORT RELATES ONLY TO THE ITEMS LISTED ON THIS DOCUMENT AND MAY NOT BE REPRODUCED EXCEPT IN FULL.



MECHANICAL FASTENER  
 CERTIFICATE NO. A2LA 139-01  
 EXPIRATION DATE 12/31/03

NUCOR FASTENER  
 A DIVISION OF NUCOR CORPORATION

*Chris Ramer*  
 CHRIS RAMER  
 QUALITY ASSURANCE SUPERVISOR

# HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17528

Invoice No. B7010227

Invoice Date 01/05/07

Sales Order K08981

Cert No Inv Line No Item No

Quantity Lot No

Assembly No

Haydon PO

8111 60000 AFA125350

10 0001-20188

Heat  
C25519

HAYDON



BOLTS, NUTS AND FASTENER PRODUCTS

LOT NO: 0001-20188

**FASTENER TEST REPORT**  
(THIS DOCUMENT MAY BE REPRODUCED, BUT ONLY IN ITS ENTIRETY)

13162  
HAYDON BOLTS INC  
1181 UNITY ST  
PHILADELPHIA, PA  
USA, 19124

PART NO.	DATE 2002-08-09
CUSTOMER P.O. NO.	REFERENCE NO.
INVOICE DATE	INVOICE NO.

DESCRIPTION AND MARKING	A490 STRUCT BOLT(7 THREADS PER INCH) HOLLOW TRIANGLE & A-490	
SIZE	1 1/4-7 X 3 1/2	GRADE SEE 8637
		QUANTITY 3,960

**HEAT CHEMICAL ANALYSIS**

HEAT NO.	C%	Mn%	P%	S%	SI%	CR%	MO%	NI%
C25519	0.36	0.87	0.031	0.012	0.24	0.440	0.160	0.440

**MECHANICAL PROPERTIES (TESTED ACCORDING TO ASTM F606/606M) CORROSION RESISTANCE (ASTM B117)**

	PROOF LOAD (psi)	WEDGE TENSILE STRENGTH (psi)	SHEAR STRENGTH	SURFACE HARDNESS (R.90N)	CORE HARDNESS (ROCKWELL)
SPEC. MIN.	120,000	150,000			C 33.0
SPEC. MAX:		170,000			C 38.0
SAMPLE NO.1	120,000	159,000			C 34.9
NO.2	120,000	158,000			33.8
NO.3	120,000	160,000			34.4
NO.4	120,000	159,000			34.6
NO.5	120,000	160,000			35.7
NO.6	120,000	160,000			33.8
NO.7	120,000	160,000			33.6
NO.8	120,000	159,000			34.7

THE ABOVE TESTED SAMPLES HAVE BEEN INSPECTED FOR VISUAL DISCONTINUITIES AND FOUND ACCEPTABLE. THEY COMPLY IN ALL RESPECTS WITH THE FOLLOWING SPECS:  
ASTM A-490 ANSI/ASME B18.2.1 THREADS PER ANSI B1.1 CLASS 2A UNLESS OTHERWISE SPECIFIED.

Raw material used to manufacture fasteners is mercury and asbestos-free. Fasteners were tested in the bare metal condition.

MANUFACTURED BY: INFASCO

Abdelhaq El Ouadi, eng.  
ISO Coordinator

\*\* PAGE TOTALE .02\*\*

# HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17528

Invoice No. B7010227

Invoice Date 01/05/07

Sales Order K08981

Cert No 29694

Inv Line No 70000

Item No VDH125

Quantity 45

Lot No AW961

Heat

S73913

Assembly No

Haydon PO  
A44773

# INSPECTION CERTIFICATE



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

Customer	Specification	Lot No.	Date
	ASTM A-563 GRADE DH HEAVY HEX NUT	AW961	Aug. 28, '06
	Size 1-1/4-7 UNC		

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
GERDAU AMER	CARBON			0.55	-	0.60	0.040	0.050	-	-	-	-
STEEL (NO	STEEL	S73913		0.43	0.19	0.66	0.012	0.031	0.25	0.09	0.15	0.03

Mechanical Property Inspection						
Item	Proof Load	Cone Stripping	Hardness	Hardness	Absorbed Energy	Heat Treatment
169,575		-	24-38			
Spec.	lb f	kN • kgf • lbf	H•C	H•B • HB	J • kgfm • ftlbf	
n	n	n	29.4 28.7 29.0 28.7 28.4			Q: FORGING Q (W.Q.)  T: 1184° F / 45M. (W.C.)
Results	Results	Results	Results	Results	Results	Q: Quenching T: Tempering ST: Solution Treatment
	GOOD	-	After 24 Hr.X	°F (°C)		

Shape & Dimension	ANSI B18.2.2
Inspection	GOOD
Thread Precision	ANSI B1.1 CLASS 2B GOOD
Inspection	
Appearance	
Inspection	GOOD
Remarks:	"DH U"  Production Quantity 13,938 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

# GERDAU AMERISTEEL St Paul Mill

M520889

P.O Box 64189  
1678 Red Rock Road  
Saint Paul, Minnesota 55164

Heat #:	S73913
Size:	1-9/16"
Product:	Round Bar
Grade:	C1045M23FC
Date Rolled:	01-05-2006
P.O	32950
M.O #:	511300106

## CERTIFIED TEST REPORT

### CHEMICAL ANALYSIS (WT %)

C	Mn	P	S	Si	Sn	Cu	Ni	Cr	Mo	Cb	V	Co	Al	Ti	Ca ppm	N ppm
0.43	.66	0.012	0.031	0.19	0.009	0.25	0.09	0.15	0.03	0.001	0.027	0.009	0.003	0.0027	15	87

MATERIAL 100% MELTED AND ROLLED IN THE USA. MANUFACTURING PROCESSES FOR THIS STEEL, WHICH MAY INCLUDE SCRAP MELTED IN AN ELECTRIC ARC FURNACE AND HOT ROLLING, HAVE BEEN PERFORMED AT GERDAU AMERISTEEL MINNESOTA, 1678 RED ROCK ROAD, SAINT PAUL MINNESOTA, USA. ALL PRODUCT PRODUCED FROM STRAND CAST BILLETS. NO WELD REPAIRMENT PERFORMED. STEEL NOT EXPOSED TO MERCURY OR ANY LIQUID ALLOY WHICH IS LIQUID AT AMBIENT TEMPERATURES DURING PROCESSING OR WHILE IN GERDAU AMERISTEEL MINNESOTA POSSESSION.

### 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

### MECHANICAL TEST REPORT

SPECIMEN AREA (in <sup>2</sup> )	YIELD (Kips)	YIELD (Ksi)	TENSILE (Kips)	TENSILE (Ksi)	GAUGE LENGTH (in)	% ELONG	BEND	% R.A.

### Additional Specifications/Comments:

A576-90b (2000)  
A29/A29M-05

Grain Size: Fine	Reduction Ratio: 15.8:1	C.E Per:	As Rolled surface Hardness
Coding:	D.I: 1.36 in. Ms: 627.2 Deg F.	C.E:	HBW HRC
			Test 1: Test 2:

CHARPY IMPACT TEST		
* Temp (F)	Test 1	Test 2
ft-lb 1		
ft-lb 2		
ft-lb 3		

ASTM E45 is not a laboratory accredited test.

Micro Clean Average									
At:	Ah:	Bt:	Bh:	Ct:	Ch:	Dt:	Dh:	S-Rating	O-Rating:
Macro Etch :									

### ASTM Test Method

Accredited to:	ASTM A370	ASTM E8	ASTM E10	ASTM E18	ASTM E23	ASTM E112	ASTM E255	ASTM E290	ASTM E415	ASTM E1019
ISO 17025	X	X	X	X				X	X	X
subcontractor (ISO 17025)		*			*	*	*			

The above results relate only to the items tested.

Chemical tests performed in accordance with ASTM E415 and E1019. Mechanical tests performed in accordance to ASTM E8, E10, E18, E290 and A370. All other tests performed in accordance with the requirements of applicable specifications unless otherwise noted above. We hereby certify that the above test results are representative of those contained in the records of the company.

Any modification to this certificate as provided by Gerdau Ameristeel - Minnesota without the expressed written consent of Gerdau Ameristeel - Minnesota negates the validity of this test report. This report shall not be reproduced except in full, without the expressed written consent of Gerdau Ameristeel Minnesota. Gerdau Ameristeel - Minnesota is not responsible for the inability of this material to meet specific applications.

X Gerdau Ameristeel Minnesota, A2LA Certification #1055-01 Exp. 6/30/06

\* Denotes Testing By Sub-Contractor:  
Metallurgical Services Inc., A2LA Certification #510-01 Exp. 12/31/06  
Stork Twin City Testing, A2LA Certification #1479-01 Exp 12/31/06

Measurement of uncertainty information is available upon request.

SIGNED:

DATE: 04-10-2006

APPROVAL:

QA Approval

*K. Wong*

Ken Wong

SWORN AND SUBSCRIBED TO BEFORE ME

THIS

DAY

THIS CERTIFICATE



DEBBA L. KARIESCH

Notary Public - Minnesota

My Commission Expires Jan 31, 2010

# HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17528

Invoice No. B7010227

Invoice Date 01/05/07

Sales Order K08981

Cert No 30739

Inv Line No 80000

Item No AAW125

Quantity 45

Lot No 212614

Heat 167418

Assembly No

Haydon PO  
A45484



**STAMPING THE FUTURE**  
WROUGHT WASHER MFG., INC.



November 29, 2006

**Certification of Compliance**

007594  
HAYDON BOLTS, INC  
1181 UNITY STREET  
PHILADELPHIA, PA 19124

**Wrought Washer  
Ord/Lot Number  
212614**

**Heat Number**  
167418

**Chemical Analysis**  
C Mn P S Si  
0.370 0.900 0.013 0.001 0.195

**Purchase  
Order Number**  
A45484-DEC

**Part Description**  
1 1/4 S MARK HT

**Date  
Shipped**  
11/29/2006

**Quantity  
Shipped**  
2,100

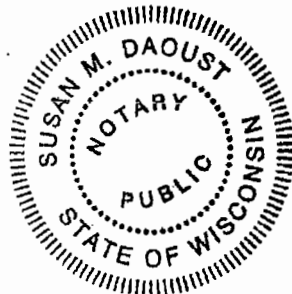
We hereby certify that the subject parts conform to the requirements of the applicable specification indicated for the subject parts and are in complete conformance to F436-04. We hereby certify that the subject parts were hardened to RC 38-45.

We hereby certify that all statutory requirements as to American Production and Labor Standards and all conditions of purchase applicable to the transaction have been complied with and that the subject parts were melted and manufactured in the U.S.A.

Truly yours,  
Wrought Washer Mfg., Inc.

Paul Schaefer  
Q.C. Manager

Sworn and subscribed before me on November 29, 2006  
My commission expires June 21, 2009



(030) SMARK, HT, F436  
WW INTERNAL USE : 48487902/006/017338/33022

**NUCOR**  
SHEET MILL GROUP

Nucor Steel-Crawfordsville  
4537 South Nucor Road  
Crawfordsville, IN 47933-9450

Order Number: 159381 - 0004  
Order Dimensions: 0.1380 in X 48.0000 in  
HRPO, PTL, 1035

SAE J403 1035

METALLURGICAL TESTING CERTIFICATION

C105974

Certificate Number: 170664  
Date Issued: 20060412  
Page: 2 of 2

Customer Name: WROUGHT WASHER MFG. INC.  
Customer Address: 2100 SOUTH BAY STREET

MILWAUKEE WI 53207

Cust PO Number: H1229

Coil Number 1039345.000  
Rockwell B: 86

Part Number 842149

TRAIL

Heat	Slab	C	Mn	P	S	Si	Cu	Sn	Ni	Cr	Mo	Al	N	V	Nb	Ti	B	Sb
167418	01	0.37	0.900	0.013	<0.001	0.195	0.092	0.011	0.033	0.073	0.011	0.038	0.009	<0.001	0.001	0.003	<0.001	0.002

CHEMICAL ANALYSIS

Coil Number 1039346.000  
Rockwell B: 86

Part Number 842149

TRAIL

Heat	Slab	C	Mn	P	S	Si	Cu	Sn	Ni	Cr	Mo	Al	N	V	Nb	Ti	B	Sb
167418	02	0.37	0.900	0.013	<0.001	0.195	0.092	0.011	0.033	0.073	0.011	0.038	0.009	<0.001	0.001	0.003	<0.001	0.002

CHEMICAL ANALYSIS

**M10 33022**

WE HEREBY CERTIFY THE ABOVE IS CORRECT AS CONTAINED IN THE RECORDS OF THE CORPORATION  
MELTED AND ROLLED IN THE USA

*[Signature]*  
NUCOR QUALITY ASSURANCE

Standard Heat Treating, LLC  
**Certification**

Order No.: 94508  
Date: 06/05/2006  
Entry Date: 05/31/2006  
Page: 1 of 1

**To:**

Wrought Washer Mfg., Inc  
2100 South Bay Street

Purchase Order No.: 212614

Packing List No.:

Milwaukee WI 53207

Material: 1040

Standard Heat Treating certifies the listed results of inspection and testing to accurately reflect the processes performed and data obtained as a result of our heat treatment of the specified product.

Quantity	Part Number / Part Name / Part Description	Pounds
134,616	017338 886089	18650

Insp. Type	Scale	Minimum	Maximum	Number	Other
<b>Customer Requirements:</b>					
Test	RC	38.	45.		38-45 HRC

Austentized and quenched and tempered to obtain a hardness of 39-43 HRC.

Alternate signature may include Jim Perkne (Dir., Customer Service) or Efrain Santoyo (Dir., Production), Walter Santoyo (Office Manager) or Paul Wilson (Inspector).



John Soltys  
Director, Quality  
Standard Heat Treating, LLC

# HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17528

Invoice No. B7010227

Invoice Date 01/05/07

Sales Order K08981

Cert No Inv Line No Item No

Quantity Lot No

Assembly No

Haydon PO

29568 100000 PTF113375

10 AV871A

Heat 423860

A44772

# INSPECTION CERTIFICATE

SET LOT NO. AV871A

**UNYRITE, INC.**  
One Unyrite Drive  
Peru, Illinois 61354


815-224-2221 — FAX # 815-224-3434



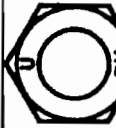
Specification	Size	Quantity
ASTM A490 Type 1	1-1/8 UNC X 3-3/4	6,325 PCS.
ASTM A563 Grade DH		
ASTM F436 Type 1		

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

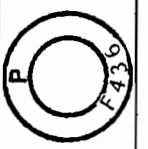
**BOLT LOT NO.** AV871 **Date:** Aug. 11, '06

Mechanical Property of Full Size Bolts	Heat Treatment	IDENTIFICATION	Chemical Composition %												
			Tensile Strength	Proof Load (Length Method)	HRC	C	Si	Mn	P	S	Cu	Ni	Cr	Mo	B
Load (lbf)	9150 lbf.	 Heat No.													
Position of fracture	Max.														
Part of Screw	+/- 0.0005 in.		30												
Part of Screw	ALL PASS		48												
Spec.			41	24	91	11	12	8	5	95	17	1			
Average 8 pcs			423860												

**NUT LOT NO.** AF671

Mechanical Property of Full Size Nuts	Heat Treatment	IDENTIFICATION	Chemical Composition %											
			Hardness After 24 hr x 1000° F HRB	Proof Load (Lbf)	HRC	C	Si	Mn	P	S	Cu	Ni	Cr	
Min.		 Heat No.												
HRB 89	1336.00			20										
Spec.			55											
Mean/5pcs	ALL PASS		45	18	21	18	8	8						

**WASHER LOT NO.** WB7376

Mechanical Property of Full Size Washers	Heat Treatment	IDENTIFICATION	Chemical Composition %										
			Hardness After 24 hr x 1000° F HRB	Proof Load (Lbf)	HRC	C	Si	Mn	P	S	Cu	Ni	Cr
Min.		 Heat No.											
HRB 89	1336.00			20									
Spec.			55										
Mean/5 Pcs.	ALL PASS		45	18	21	18	8	8					

Material used for the bolt, nut and washer were melted & manufactured in the USA. The product was manufactured in the USA to ASTM specifications. The bolt and nut are manufactured by Unyrite. We hereby certify that the material described has been manufactured and inspected satisfactory with requirement of the above specification.

**Fastener Tension**  
Fastener Tension  
Spec. (lbf.) 84000  
Mean ± 6 sets. 105714  
6146

**Thread Accuracy**  
(Bolt & Nut)  
Bolt ASME B1.1 Class 2A  
Nut ANSİ B1.1 Class 2B

**REMARKS**  
THESE BOLTS HAVE BEEN MAGNETIC PARTICLE INSPECTION IN ACCORDANCE WITH THE REQUIREMENTS OF SPECIFICATION ASTM A490

UNYRITE, INC. Chief of Quality Assurance Section  
08-14-06

LOAD



# CHARTER STEEL

## CHARTER STEEL TEST REPORT Reverse Has Text And Codes

A Division of  
Charter Manufacturing Company, Inc.

1658 Cold Springs Road  
Saukville, Wisconsin 53080  
(262) 268-2400  
1-800-437-8789  
FAX (262) 268-2570

UNYTITE, INC.  
ONE UNYTITE DRIVE  
PERU, IL 61354-  
Attn: ATTN: JEAN MARGHERIO

Cust. P.O.	33617
Cust Part#	C4140SC1.0953S
Charter Sales Order	212944
Heat #	423860
Ship Lot #	489313
Grade#	4140 A SK FG RHQ
Process	SA + SAIP
Finish Size	1.095

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed below and on the reverse side, and that it satisfies those requirements.

### Test Results of Heat Lot# 423860

LAB CODE: 7388

Chemistry	C	MN	P	S	SI	NI	CR	MO	CU	SN	V
Wt%	0.41	0.91	0.011	0.012	0.240	0.05	0.95	0.17	0.08	0.008	0.001

AL	N	B	TI	NB
0.025	0.0060	0.0001	0.001	0.003

CHEM. DEVIATION EXT.-GREEN = N/R

### Test Results of Rolling Lot # 340919

QC DEVIATION EXT.-GREEN = N/R

### Test Results of Processing Lot # 489313

	# of Tests	Min Value	Max Value	Mean Value
TENSILE (KSI)	3	80.9	82.3	81.5
REDUCTION OF AREA (%)	3	61	68	65
ROCKWELL B (HRBW)	3	89	91	90
WIRE SIZE (Inches)	20	1.093	1.094	1.093
WIRE OUT OF ROUND (Inches)	20	0.000	0.001	0.000

TENSILE LAB = 0358-02  
RA LAB = 0358-02  
RB LAB = 0358-02

NUM DECARB = 3      FREE FERRITE DECARB = 0.000      FREE FERR & PARTIAL DECARB = 0.000  
CP SPHERO % LAB = 0358-02      NUM SPHERO = 3      SPHERODIZATION (%) = 85.0  
QC DEVIATION EXT.-PROCESSED = N/R

Specifications: Meets customer specifications with any applicable Charter Steel exceptions for the following customer documents:  
Customer Document = UNYTITE RMS-001      Revision = 4      Dated = 23-AUG-2002

Charter Steel  
Saukville, WI, USA

Fax number: ( )      Rem: Load1,Mail0,Fax0



Tim Leahy  
Manager of Quality Assurance  
06/20/2006

The following statements are applicable to the material described on the front of this Test Report:

1. Except as noted, the steel supplied for this order was melted, rolled and processed in the United States.
2. Mercury was not used during the manufacture of this product; nor was the steel contaminated with mercury during processing.
3. Unless directed by the customer, there are no welds in any of the coils produced for this order.
4. The laboratory that generated the analytical or test results can be identified by the following key:

Certificate Number	Lab Code	Laboratory		Address
0358-01	7388	<b>CSMD</b>	Charter Steel Melting Division	1658 Cold Springs Road, Saukville, WI 53080
0358-02	8171	<b>CSR/ CSPD</b>	Charter Steel Rolling/ Processing Division	1658 Cold Springs Road, Saukville, WI 53080
0358-03	123633	<b>P4</b>	Charter Steel Ohio Processing Division	6255 US Highway 23, Risingsun, OH 43457
0358-04	125544	<b>CSC</b>	Charter Steel Cleveland	4300 E. 49 <sup>th</sup> St., Cuyahoga Heights, OH 44125-1004
*	*	--	Subcontracted test performed by laboratory not in Charter Steel system	

5. When run by a Charter Steel laboratory, the following tests were performed according to the latest revisions of the specifications listed below, as noted in the Charter Steel Laboratory Quality Manual:

Test	Possible Laboratory	Specification
Chemistry Analysis	CSMD	ASTM E415; ASTM E1019
Macroetch	CSMD	ASTM E381
Hardenability (Jominy)	CSMD	ASTM A255; JIS G0561
Grain Size	CSMD	ASTM E112
Tensile Test	CSR/ CSPD, P4, CSC	ASTM E8; ASTM A370
Rockwell Hardness	CSR/ CSPD, P4, CSC	ASTM E18; ASTM A370
Microstructure (spheroidization)	CSR/ CSPD, P4	ASTM A892
Cleanliness	CSR/ CSPD, CSC	ASTM E45

Charter Steel has been accredited to perform all of the above tests by the American Association for Laboratory Accreditation (A2LA). These accreditations expire 01/31/07.

All other test results associated with a Charter Steel laboratory that appear on the front of this report, if any, were performed according to documented procedures developed by Charter Steel and are not accredited by A2LA.

6. The test results on the front of this report are the true values measured on the samples taken from the production lot. They do not apply to any other sample.
7. This test report cannot be reproduced or distributed except in full without the written permission of Charter Steel. The primary customer whose name and address appear on the front of this form may reproduce this test report, subject to the following restrictions:
  - It may be distributed only to their customers
  - Both sides of all pages must be reproduced in full
8. This certification is given subject to the terms and conditions of sale provided in Charter Steel's acknowledgment (designated by our Purchase Order number) to the customer's purchase order. Both Purchase Order numbers appear on the front page of this Report.
9. Where the customer has provided a specification, the results on the front of this test report conform to that specification unless otherwise noted on this test report.



# TEST REPORT

**MITTAL**

REQ., JOB, CONTRACT NO.		PURCHASE ORDER NO. <b>32288</b>	
V E N D O R  <b>MITTAL STEEL USA</b> INDIANA HARBOR BAR PRODUCTS 3300 DICKEY ROAD EAST CHICAGO, INDIANA 46312	SHIPPER'S NO.	M.I.L. ORDER NO. <b>212278</b>	
	REPORT PRINT DATE	<b>10/22/2005</b>	

TEST REPORT TO:	SHIPTO:
<b>UNYTITE</b>	<b>UNYTITE, INC</b>
<b>1 UNYTITE DR</b>	<b>ONE UNYTITE DRIVE</b>
<b>PERU IL 61354</b>	<b>PERU IL, 61354</b>

CMS (REG TM) SQ HOT ROLLED ROUNDS SAE 1045 MOD /RMS-009 (03/09/01) 5 / FINE GRAIN/CWQ/RESTRICTED CHEMICAL REQ/RESTRICTED MAX INCIDENTAL ELEMENTS/MRR FOR SPEC SURF & CLEAN/SPECIAL STRAIGHTENED/EDDY CURRENT TESTED/

RND 1.3750 IN X 24 FT 10 1/2 IN

HEAT: 599685 C : 0.45 Mn: 0.66 P : .012 S : .021 Si: 0.18  
 Cu: .18 Ni: 0.08 Cr: 0.08 Mo: .03 Al: .021  
 Cb: .001 V : .001 N : .009 Ti: .001

Ni+Cr = 0.16

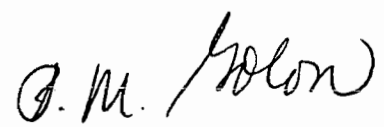
MICROCLEANLINESS per A (SULF) B (ALUM) C (SILI) D (OXID)  
 ASTM E45 METHOD A 2.0T 0.0H 0.0T 0.0H 0.0T 0.0H 1.0T 0.0H

DECARBURIZATION: A.A.D. 0.009"

PART NUMBER: CSRB1045M1375


MATERIAL MEETS AUSTENITIC GRAIN SIZE REQUIREMENT OF 5 OR FINER  
 MATERIAL IS 100% SMELT/MELT AND MANUFACTURED IN THE U.S.A.

PAMELA M GOLON  
 NOTARY PUBLIC STATE OF INDIANA  
 LAKE COUNTY  
 MY COMMISSION EXP. MAR. 25, 2010



**NOTARY**



Unless otherwise stated, the steel described herein was manufactured, inspected and tested in accordance with the requirements of the contract or purchase order and conform to those requirements. The steel is free of surface mercury contamination at the time of shipment based on present methods and detection equipment. No mercury, radium or alpha source materials were used in the production of this steel. This steel has not been welded nor repair welded. Heat analyses and test results marked with an asterisk (*) were reported by a Mittal Steel USA, Indiana Harbor Bar Products approved third party. The "+" sign at the beginning of any line indicates an amendment to that line from a previously issued report for the same heat/order. All tests were performed by Mittal Steel USA, Indiana Harbor Bar Products, in accordance with the following, unless otherwise specified: Chemistry per ASTM E415 & E1019; Hardenability per ASTM A255 and SAE J406; Macrostructure per ASTM E381 & E1180; Mechanical Properties per ASTM A370, E8 & E23; Hardness per ASTM E10 & E18; and SAE J417; Cleanliness per SAE J421; Microstructure/Microcleanliness per ASTM E3, E45, E112 & E1077, J419 & J422, and JIS G0555; NDT per ASNT-TC-1A, Rounding per ASTM E29. Tested per most recent standard, unless otherwise noted. We hereby certify that the heat and/or test results in this report are applicable only to the items described herein, and are correct as contained in the records of the Company. This document shall not be reproduced except in full.	The management system governing the manufacture of this product is ISO/TS 16949:2002 certified, Certificate No. 38325; ISO 14001:1996 certified, Certificate No. 36274 and AZLA accredited in the fields of: Chemical, Mechanical and Environmental Testing - Certificate Nos. 111.01, 111.02 and 111.03   Kevin R. Oberembt Manager - Quality Department
---	--





640 Lavoy Road  
Erie, MI 48133  
Phone: 734/848-2915 Fax: 734/848-8734

# CERTIFICATE OF B7376 ANALYSIS

CUSTOMER ORDER NO: 13497	CERTIFICATION NO: 22-123107	SHIPPER NO: 22-123107	CERTIFIED DATE: 09/29/05
CUSTOMER PART NO: P2281H00	DH	SIZE: .1360 x 4.4370 x COIL	

GRADE:  
SAE J403 1050

COATING SPECIFICATION  
MILL PRODUCED AND MANUFACTURED IN THE  
U.S.A.

CUSTOMER:

PRESTIGE STAMPING INC. \*\*

P O BOX 1086

WARREN

MI 480901086

ATTENTION:

~~All units of measurement for chemistry are in weight percent.~~

COIL NO. HEAT NUMBER CHEMISTRY AND MECHANICAL PROPERTIES

EP5703	C34508	C = 0.510 MN= 0.710 P <sub>0.009</sub> S = 0.003 SI= 0.030 AL= 0.038
--------	--------	---

COMMENT:\*\* MILL CERTIFICATION WITH LOAD \*\*

## RECEIVED

OCT 03 2005

THE ABOVE MECHANICAL AND CHEMICAL ANALYSES WERE SUPPLIED  
BY THE PRODUCING MILL OR TESTED ON OUR OWN EQUIPMENT.  
Form No. FQC 001 Rev. 2

Agent for Heidtman Steel Products, Inc.

# HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17528

Invoice No. B7010227

Invoice Date 01/05/07

Sales Order K08981

Cert No 30219

Inv Line No 110000

Item No PTF100425

Quantity 20

Lot No AT481A

Heat 425870

Assembly No

Haydon PO

A44772

# INSPECTION CERTIFICATE

AT481A

**UNYRITE, INC.**

One Unyrite Drive  
Peru, Illinois 61354

815-224-2221 — FAX # 815-224-3434



Specification	Quantity
ASTM A490 F2280 Type 1	5,695 pcs.
ASTM A563 Grade DH	
ASTM F436 Type 1	

1 - 8 UNC X 4-1/4

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

**BOLT LOT NO.** AT481

**Date:** Oct. 02, '06

Mechanical Property of Full Size Bolts				Chemical Composition %											
				Tensile Strength	Proof Load	Hardness	IDENTIFICATION								
Load (lbf)	Position of fracture	72700 (Length Method)	HRC	Heat Treatment °F (°C)		C x 100 x 1000									
		Max.		Quench	Temper	Mn	P	S	Cu	Ni	Cr	Mo	B		
		Part of Screw			Min.	800	40	40					100	10,000	
90900		+													
104850		Max.													
99325		ALL PASS	33.5	1580	1004	39	26	95	9	12	9	82	21	1	
Average 8 pcs						425870									

**NUT LOT NO.** AX051

Mechanical Property of Full Size Nuts				Chemical Composition %											
Hardness After 24 hr x 1000° F HRB	Proof Load (Lbf)	Hardness	HRC	IDENTIFICATION											
Min.		Quench	Temper	Heat Treatment °F (°C)		C x 100 x 1000									
		Min.		Quench	Temper	Mn	P	S	Cu	Ni	Cr	B			
		850				60	40	50				100	10,000		
24 - 38	106050														
28.9	ALL PASS	1562	1211	574340		68	9	27	33	13	17				
Mean/5 pcs						45	23	9	27	33	13	17			

**WASHER LOT NO.** WB8352

Mechanical Property of Full Size Washers				Chemical Composition %											
Hardness (HRC)	Proof Load (Lbf)	Hardness	HRC	IDENTIFICATION											
Min.		Quench	Temper	Heat Treatment °F (°C)		C x 100 x 1000									
		Min.		Quench	Temper	Mn	P	S	Cu	Ni	Cr	B			
		850 <td></td> <td></td> <td></td> <td>60</td> <td>40</td> <td>50</td> <td></td> <td></td> <td></td> <td>100</td> <td>10,000</td>				60	40	50				100	10,000		
38 - 45	106050														
41.5	ALL PASS	1562	1211	574340		68	9	27	33	13	17				
Mean/5 Pcs						45	23	9	27	33	13	17			

Material used for the bolt, nut and washer were melted & manufactured in the USA. The product was manufactured in the USA to ASTM specifications. The bolt and nut are manufactured by Unyrite. We hereby certify that the material described has been manufactured and inspected satisfactory with requirement of the above specification.

10-07-06

Chief of Quality Assurance Section

*[Signature]*

Thread Accuracy (Bolt & Nut)	REMARKS
Bolt ASME B1.1 Class 2A	THESE BOLTS HAVE BEEN MAGNETIC PARTICLE INSPECTION IN ACCORDANCE WITH THE REQUIREMENTS OF SPECIFICATION ASTM A490
Nut ASME B1.1 Class 2B	

### Fastener Tension

Fastener Tension	
Spec. (lbf.)	Min.
67200	86410
Mean / 5 sets.	2377
Standard Deviation	

Mechanical Property of Full Size Washers				Chemical Composition %											
Hardness (HRC)	Proof Load (Lbf)	Hardness	HRC	IDENTIFICATION											
Min.		Quench	Temper	Heat Treatment °F (°C)		C x 100 x 1000									
		Min.		Quench	Temper	Mn	P	S	Cu	Ni	Cr	B			
		850 <td></td> <td></td> <td></td> <td>60</td> <td>40</td> <td>50</td> <td></td> <td></td> <td></td> <td>100</td> <td>10,000</td>				60	40	50				100	10,000		
38 - 45	106050														
41.5	ALL PASS	1562	1211	574340		68	9	27	33	13	17				
Mean/5 Pcs						45	23	9	27	33	13	17			

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

LOAD



# CHARTER STEEL

## CHARTER STEEL TEST REPORT Reverse Has Text And Codes

A Division of,  
Charter Manufacturing Company, Inc.

1658 Cold Springs Road  
Saukville, Wisconsin 53080

(262) 268-2400

1-800-437-8789

FAX (262) 268-2570

**UNYTITE, INC.**  
**ONE UNYTITE DRIVE**  
**PERU, IL 61354-**  
**Attn: ATTN: JEAN MARGHERIO**

Cust. P.O.	33617
Cust Part#	C4140SC0.984A
Charter Sales Order	211781
Heat #	425870
Ship Lot #	490321
Grade#	4140 A SK FG RHQ
Process	DFSAR
Finish Size	0.984

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed below and on the reverse side, and that it satisfies those requirements.

**Test Results of Heat Lot# 425870**

Lab Code: 7388	C	MN	P	S	SI	NI	CR	MO	CU	SN	V
Chemistry	0.39	0.95	0.009	0.012	0.260	0.07	0.82	0.21	0.09	0.008	0.001
Wt%											
	AL	N	B	TI	NB						
	0.024	0.0070	0.0001	0.001	0.002						

CHEM. DEVIATION EXT.-GREEN = N/R

**Test Results of Rolling Lot # 342223**

QC DEVIATION EXT.-GREEN = N/R

**Test Results of Processing Lot # 490321**

	# of Tests	Min Value	Max Value	Mean Value	
TENSILE (KSI)	3	92.7	92.9	92.9	TENSILE LAB = 0358-02
REDUCTION OF AREA (%)	3	59	60	59	RA LAB = 0358-02
ROCKWELL B (HRBW)	3	92	94	93	RB LAB = 0358-02
WIRE SIZE (Inches)	10	0.982	0.983	0.982	
WIRE OUT OF ROUND (Inches)	10	0.000	0.001	0.000	

NUM DECARB = 2    FREE FERRITE DECARB = 0.000    FREE FERR & PARTIAL DECARB = 0.001  
CP SPHERO % LAB = 0358-02    NUM SPHERO = 2    SPHERODIZATION (%) = 82.5  
QC DEVIATION EXT.-PROCESSED = N/R

Specifications:      Meets customer specifications with any applicable Charter Steel exceptions for the following customer documents:  
Customer Document = UNYTITE RMS-003      Revision = 2      Dated =

Additional Comments:

Charter Steel  
Saukville, WI, USA



Tim Leahy  
Manager of Quality Assurance  
06/27/2006

The following statements are applicable to the material described on the front of this Test Report:

1. Except as noted, the steel supplied for this order was melted, rolled and processed in the United States.
2. Mercury was not used during the manufacture of this product; nor was the steel contaminated with mercury during processing.
3. Unless directed by the customer, there are no welds in any of the coils produced for this order.
4. The laboratory that generated the analytical or test results can be identified by the following key:

Certificate Number	Lab Code	Laboratory		Address
0358-01	7388	<b>CSMD</b>	Charter Steel Melting Division	1658 Cold Springs Road, Saukville, WI 53080
0358-02	8171	<b>CSR/ CSPD</b>	Charter Steel Rolling/ Processing Division	1658 Cold Springs Road, Saukville, WI 53080
0358-03	123633	<b>P4</b>	Charter Steel Ohio Processing Division	6255 US Highway 23, Risingsun, OH 43457
0358-04	125544	<b>CSC</b>	Charter Steel Cleveland	4300 E. 49 <sup>th</sup> St., Cuyahoga Heights, OH 44125-1004
*	*	--	Subcontracted test performed by laboratory not in Charter Steel system	

5. When run by a Charter Steel laboratory, the following tests were performed according to the latest revisions of the specifications listed below, as noted in the Charter Steel Laboratory Quality Manual:

Test	Possible Laboratory	Specification
Chemistry Analysis	CSMD	ASTM E415; ASTM E1019
Macroetch	CSMD	ASTM E381
Hardenability (Jominy)	CSMD	ASTM A255; JIS G0561
Grain Size	CSMD	ASTM E112
Tensile Test	CSR/ CSPD, P4, CSC	ASTM E8; ASTM A370
Rockwell Hardness	CSR/ CSPD, P4, CSC	ASTM E18; ASTM A370
Microstructure (spheroidization)	CSR/ CSPD, P4	ASTM A892
Cleanliness	CSR/ CSPD, CSC	ASTM E45

Charter Steel has been accredited to perform all of the above tests by the American Association for Laboratory Accreditation (A2LA). These accreditations expire 01/31/07.

All other test results associated with a Charter Steel laboratory that appear on the front of this report, if any, were performed according to documented procedures developed by Charter Steel and are not accredited by A2LA.

6. The test results on the front of this report are the true values measured on the samples taken from the production lot. They do not apply to any other sample.
7. This test report cannot be reproduced or distributed except in full without the written permission of Charter Steel. The primary customer whose name and address appear on the front of this form may reproduce this test report, subject to the following restrictions:
  - It may be distributed only to their customers
  - Both sides of all pages must be reproduced in full
8. This certification is given subject to the terms and conditions of sale provided in Charter Steel's acknowledgment (designated by our Purchase Order number) to the customer's purchase order. Both Purchase Order numbers appear on the front page of this Report.
9. Where the customer has provided a specification, the results on the front of this test report conform to that specification unless otherwise noted on this test report.





**GERDAU AMERISTEEL**

**St Paul Mill**

M621767

P.O Box 64189  
1678 Red Rock Road  
Saint Paul, Minnesota 55164

Heat #:	S74340
Size:	1-1/4"
Product:	Round Bar
Grade:	C1045M23FC
Date Rolled:	01-30-2006
P.O	33664
M.O #:	600633203
lgth 24'10"	

# CERTIFIED TEST REPORT

## CHEMICAL ANALYSIS (WT %)

C	Mn	P	S	Si	Sn	Cu	Ni	Cr	Mo	Cb	V	Co	Al	Ti	Ca ppm	N ppm
0.45	.68	0.009	0.027	0.23	0.022	0.33	0.13	0.17	0.04	0.001	0.03	0.01	0.002	0.0025	18	95

MATERIAL 100% MELTED AND ROLLED IN THE USA. MANUFACTURING PROCESSES FOR THIS STEEL, WHICH MAY INCLUDE SCRAP MELTED IN AN ELECTRIC ARC FURNACE AND HOT ROLLING, HAVE BEEN PERFORMED AT GERDAU AMERISTEEL MINNESOTA, 1678 RED ROCK ROAD, SAINT PAUL MINNESOTA, USA. ALL PRODUCT PRODUCED FROM STRAND CAST BILLETS. NO WELD REPAIRMENT PERFORMED. STEEL NOT EXPOSED TO MERCURY OR ANY LIQUID ALLOY WHICH IS LIQUID AT AMBIENT TEMPERATURES DURING PROCESSING OR WHILE IN GERDAU AMERISTEEL MINNESOTA POSSESSION.

## 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

## MECHANICAL TEST REPORT

SPECIMEN AREA (in <sup>2</sup> )	YIELD (Kips)	YIELD (Ksi)	TENSILE (Kips)	TENSILE (Ksi)	GAUGE LENGTH (in)	% ELONG	BEND	% R.A.

### Additional Specifications/Comments:

A576-90b (2000)

A29/A29M-05

Quality Program Manual Rev. I, dtd 6/10/05

Grain Size: <input type="text" value="Fine"/>	Reduction Ratio: <input type="text" value="24.6:1"/>	C.E Per: <input type="text"/>	As Rolled surface Hardness	
Coding: <input type="text"/>	D.I: <input type="text" value="1.61"/> in.	Ms: <input type="text" value="606.8"/> Deg F.	C.E: <input type="text"/>	HBW <input type="text"/>
			Test 1:	HRC <input type="text"/>
			Test 2:	<input type="text"/>

### CHARPY IMPACT TEST

* Test 1	Test 2
Temp (F)	
ft-lb 1	
ft-lb 2	
ft-lb 3	

ASTM E45 is not a laboratory accredited test.

### Micro Clean Average

At:  Ah:  Bt:  Bh:  Ct:  Ch:  Dt:  Dh:  S-Rating:  O-Rating:

Macro Etch:

### ASTM Test Method

Accredited to:	ASTM A370	ASTM E8	ASTM E10	ASTM E18	ASTM E23	ASTM E112	ASTM E255	ASTM E290	ASTM E415	ASTM E1019
ISO 17025	X	X	X	X				X	X	X
subcontractor (ISO 17025)		*			*	*	*			

The above results relate only to the items tested.

Chemical tests performed in accordance with ASTM E415 and E1019. Mechanical tests performed in accordance to ASTM E8, E10, E18, E290 and A370. All other tests performed in accordance with the requirements of applicable specifications unless otherwise noted above. We hereby certify that the above test results are representative of those contained in the records of the company.

Any modification to this certificate as provided by Gerdau Ameristeel - Minnesota without the expressed written consent of Gerdau Ameristeel - Minnesota negates the validity of this test report. This report shall not be reproduced except in full, without the expressed written consent of Gerdau Ameristeel - Minnesota. Gerdau Ameristeel - Minnesota is not responsible for the inability of this material to meet specific applications.

X Gerdau Ameristeel Minnesota, A2LA Certification #1055-01 Exp. 6/30/06

\* Denotes Testing By Sub-Contractor:  
Metallurgical Services Inc., A2LA Certification #510-01 Exp. 12/31/06  
Stork Twin City Testing, A2LA Certification #1479-01 Exp 12/31/06

Measurement of uncertainty information is available upon request.

SIGNED: \_\_\_\_\_

DATE: 08-09-2006

APPROVAL: \_\_\_\_\_

QA Approval

*K. Wong*

Ken Wong

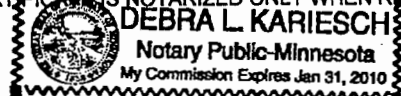
SWORN AND SUBSCRIBED TO BEFORE ME

THIS

DAY

2006

THIS CERTIFICATE IS NOT VALID UNLESS REQUESTED.



B 8352



640 Lavoy Road  
Erie, MI 48133  
Phone: 734/848-2915 Fax: 734/848-8734

# CERTIFICATE OF ANALYSIS

CUSTOMER ORDER NO: 14100	CERTIFICATION NO: 2-212046	SHIPPER NO: 2-212046	CERTIFIED DATE: 06/06/06
CUSTOMER PART NO: P2085H01	RF	SIZE: .1360 <sub>x</sub> 5.7340 <sub>x</sub>	COIL
CUSTOMER:  PRESTIGE STAMPING INC. **  P O BOX 1086  WARREN MI 480901086		GRADE: SAE J403 1035  MELTED AND MANUFACTURED IN THE U.S.A.	

ATTENTION:

~~All units of measurement for chemistry are in weight percent.~~

COIL NO.	HEAT NUMBER	CHEMISTRY AND MECHANICAL PROPERTIES
HM6302	9402680	C = 0.350 MN= 0.740 P = 0.009 S = 0.003 SI= 0.090 AL= 0.052

## RECEIVED

JUN 12 2006

Time 8:20 AM PK

THE ABOVE MECHANICAL AND CHEMICAL ANALYSES WERE SUPPLIED BY THE PRODUCING MILL OR TESTED ON OUR OWN EQUIPMENT.  
Form No. FQC 001 Rev. 2

Agent for Heidtman Steel Products, Inc.

# HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17528

Invoice No. B7010227

Invoice Date 01/05/07

Sales Order K08981

Cert No Inv Line No Item No

Quantity Lot No

Assembly No Haydon PO

29250 120000 PTF100400

20 AQ031A

Heat 418210

A43578



# INSPECTION CERTIFICATE

SET LOT NO. AQ031A

**UNYTITE, INC.**

One Unytite Drive  
Peru, Illinois 61354

815-224-2221 — FAX # 815-224-3434



Specification	Size	Quantity
ASTM A490 Type 1		
ASTM A563 Grade DH		
ASTM F436 Type 1	1 - 8 UNC X 4	14,565 pcs.

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

Date: Jul. 11, '06

BOLT LOT NO. AQ031

Mechanical Property of Full Size Bolts	Chemical Composition %																												
	Tensile Strength	Proof Load	Hardness	Heat Treatment		IDENTIFICATION					C		Mn		P		S		Cu		Ni		Cr		Mo		B		
Load (lbf)	Position of fracture	HRC	Quench	Temper	Min.	800	A 490		Heat No.		30 48		Max. 40		Max. 40		Max. 40		Max. 40		Max. 40		Max. 40		Max. 40		Max. 40		
90900	Part of Screw	Max. +/- 0.0005 in.								418210																			
104850							1580																						
101675	Part of Screw	ALL PASS	34.4																										
Average 8 pcs																													

NUT LOT NO. AK581

Mechanical Property of Full Size Nuts	Chemical Composition %																							
	Hardness After 24 hr x 1000° F HRB	Proof Load (Lbf)	Min.	Heat Treatment		IDENTIFICATION					C		Mn		P		S		Cu		Ni		Cr	
Min.	HRB 89	Min.	Quench	Temper	Min.	800	U DH		Heat No.		20 55		Min. 60		Max. 40		Max. 50		Max. 50		Max. 50		Max. 50	
24 - 38																								
27.7							1562																	
							1211																	
Mean/5pcs																								

WASHER LOT NO. WB726

Mechanical Property of Full Size Washers	Chemical Composition %																						
	Hardness (HRC)	Proof Load (Lbf)	Min.	Heat Treatment		IDENTIFICATION					C		Mn		P		S		Cu		Ni		Cr
38 - 45	Min.	HRB 89	Min.	Quench	Temper	Min.	800	P		Heat No.		Max. 50		Max. 40		Max. 40		Max. 40		Max. 40		Max. 40	
41.5																							
							1562																
							1211																
Mean/5 Pcs.																							

Material used for the bolt, nut and washer were melted & manufactured in the USA. The product was manufactured in the USA to ASTM specifications. The bolt and nut are manufactured by Unytite. We hereby certify that the material described has been manufactured and inspected satisfactory with requirement of the above specification.

Chief of Quality Assurance Section

*[Signature]*

Thread Accuracy (Bolt & Nut)	REMARKS
Bolt ASME B1.1 Class 2A Nut ANSI B1.1 Class 2B	THESE BOLTS HAVE BEEN MAGNETIC PARTICLE INSPECTION IN ACCORDANCE WITH THE REQUIREMENTS OF SPECIFICATION ASTM A490

Fastener Tension	Fastener Tension
Spec. (lbf.)	Min.
	67200
Mean / 6 sets.	
Standard Deviation	
	74980
	5005

LOAD



# CHARTER STEEL

## CHARTER STEEL TEST REPORT Reverse Has Text And Codes

A Division of  
Charter Manufacturing Company, Inc.

1658 Cold Springs Road  
Saukville, Wisconsin 53080  
(262) 268-2400  
1-800-437-8789  
FAX (262) 268-2570

UNYTITE, INC.  
ONE UNYTITE DRIVE  
PERU, IL 61354-  
Attn: ATTN: JEAN MARGHERIO

Cust. P.O.	33448
Cust Part#	C4140SCO.984A
Charter Sales Order	210714
Heat #	418210
Ship Lot #	485995
Grade#	4140 A SK FG RHQ
Process	DFSAR
Finish Size	0.984

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed below and on the reverse side, and that it satisfies those requirements.

### Test Results of Heat Lot# 418210

LAB CODE: 7388

Chemistry	C	MN	P	S	SI	NI	CR	MO	CU	SN	V
Wt%	0.41	0.85	0.008	0.012	0.250	0.05	0.86	0.21	0.09	0.008	0.001
	AL	N	B	TI	NB						
	0.023	0.0070	0.0002	0.002	0.002						

CHEM. DEVIATION EXT.-GREEN = N/R

### Test Results of Rolling Lot # 339035

QC DEVIATION EXT.-GREEN = N/R

### Test Results of Processing Lot # 485995

	# of Tests	Min Value	Max Value	Mean Value	
TENSILE (KSI)	3	93.1	93.5	93.4	TENSILE LAB = 0358-02
REDUCTION OF AREA (%)	3	61	62	61	RA LAB = 0358-02
ROCKWELL B (HRBW)	3	79	83	82	RB LAB = 0358-02
WIRE SIZE (Inches)	9	0.982	0.983	0.982	
WIRE OUT OF ROUND (Inches)	9	0.000	0.001	0.000	

NUM DECARB = 2      FREE FERRITE DECARB = 0.000      FREE FERR & PARTIAL DECARB = 0.000  
CP SPHERO % LAB = 0358-02      NUM SPHERO = 2      SPHERODIZATION (%) = 82.5  
QC DEVIATION EXT.-PROCESSED = N/R

Specifications:      Meets customer specifications with any applicable Charter Steel exceptions for the following customer documents:  
Customer Document = UNYTITE RMS-003      Revision = 2      Dated =



Tim Leahy  
Manager of Quality Assurance  
05/10/2006

The following statements are applicable to the material described on the front of this Test Report:

1. Except as noted, the steel supplied for this order was melted, rolled and processed in the United States.
2. Mercury was not used during the manufacture of this product; nor was the steel contaminated with mercury during processing.
3. Unless directed by the customer, there are no welds in any of the coils produced for this order.
4. The laboratory that generated the analytical or test results can be identified by the following key:

Certificate Number	Lab Code	Laboratory		Address
0358-01	7388	<b>CSMD</b>	Charter Steel Melting Division	1658 Cold Springs Road, Saukville, WI 53080
0358-02	8171	<b>CSR/D/ CSPD</b>	Charter Steel Rolling/ Processing Division	1658 Cold Springs Road, Saukville, WI 53080
0358-03	123633	<b>P4</b>	Charter Steel Ohio Processing Division	6255 US Highway 23, Risingsun, OH 43457
0358-04	125544	<b>CSC</b>	Charter Steel Cleveland	4300 E. 49 <sup>th</sup> St., Cuyahoga Heights, OH 44125-1004
*	*	--	Subcontracted test performed by laboratory not in Charter Steel system	

5. When run by a Charter Steel laboratory, the following tests were performed according to the latest revisions of the specifications listed below, as noted in the Charter Steel Laboratory Quality Manual:

Test	Possible Laboratory	Specification
Chemistry Analysis	CSMD	ASTM E415; ASTM E1019
Macroetch	CSMD	ASTM E381
Hardenability (Jominy)	CSMD	ASTM A255; JIS G0561
Grain Size	CSMD	ASTM E112
Tensile Test	CSR/D/CSPD, P4, CSC	ASTM E8; ASTM A370
Rockwell Hardness	CSR/D/CSPD, P4, CSC	ASTM E18; ASTM A370
Microstructure (spheroidization)	CSR/D/CSPD, P4	ASTM A892
Cleanliness	CSR/D/CSPD, CSC	ASTM E45

Charter Steel has been accredited to perform all of the above tests by the American Association for Laboratory Accreditation (A2LA). These accreditations expire 01/31/07.

All other test results associated with a Charter Steel laboratory that appear on the front of this report, if any, were performed according to documented procedures developed by Charter Steel and are not accredited by A2LA.

6. The test results on the front of this report are the true values measured on the samples taken from the production lot. They do not apply to any other sample.
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8. This certification is given subject to the terms and conditions of sale provided in Charter Steel's acknowledgment (designated by our Purchase Order number) to the customer's purchase order. Both Purchase Order numbers appear on the front page of this Report.
9. Where the customer has provided a specification, the results on the front of this test report conform to that specification unless otherwise noted on this test report.



Heat #:	S73126
Size:	1-1/4"
Product:	Round Bar
Grade:	C1045M23FC
Date Rolled:	11-04-2005
P.O	32486
M.O #:	508728404

**CERTIFIED TEST REPORT**

CHEMICAL ANALYSIS (WT %)

C	Mn	P	S	Si	Sn	Cu	Ni	Cr	Mo	Cb	V	Co	Al	Ti	Ca ppm	N ppm
0.44	.69	0.009	0.024	0.23	0.011	0.2	0.11	0.16	0.04	0.001	0.026	0.009	0.003	0.003	20	53

MATERIAL 100% MELTED AND ROLLED IN THE USA. MANUFACTURING PROCESSES FOR THIS STEEL, WHICH MAY INCLUDE SCRAP MELTED IN AN ELECTRIC ARC FURNACE AND HOT ROLLING, HAVE BEEN PERFORMED AT GERDAU AMERISTEEL MINNESOTA, 1678 RED ROCK ROAD, SAINT PAUL MINNESOTA, USA. ALL PRODUCT PRODUCED FROM STRAND CAST BILLETS. NO WELD REPAIRMENT PERFORMED. STEEL NOT EXPOSED TO MERCURY OR ANY LIQUID ALLOY WHICH IS LIQUID AT AMBIENT TEMPERATURES DURING PROCESSING OR WHILE IN GERDAU AMERISTEEL MINNESOTA POSSESSION.

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

MECHANICAL TEST REPORT

SPECIMEN AREA (in <sup>2</sup> )	YIELD (Kips)	YIELD (Ksi)	TENSILE (Kips)	TENSILE (Ksi)	GAUGE LENGTH (in)	% ELONG	BEND	% R.A.

Additional Specifications/Comments:

A576-90b (2000)

A29/A29M-05

quality Program Manual Rev. 1, dtd 6/10/05

Grain Size: Fine	Reduction Ratio: 24.6:1	C.E Per:	As Rolled surface Hardness
Coding:	D.I: 1.50 in. Ms: 615.6 Deg F.	C.E:	HBW HRC
			Test 1:
			Test 2:

CHARPY IMPACT TEST	
* Test 1	Test 2
Temp (F)	
ft-lb 1	
ft-lb 2	
ft-lb 3	

ASTM E45 is not a laboratory accredited test.

Micro Clean Average									
At:	Ah:	Bt:	Bh:	Ct:	Ch:	Dt:	Dh:	S-Rating	O-Rating:
Macro Etch :									

ASTM Test Method

Accredited to:	ASTM A370	ASTM E8	ASTM E10	ASTM E18	ASTM E23	ASTM E112	ASTM E255	ASTM E290	ASTM E415	ASTM E1019
ISO 17025	X	X	X	X				X	X	X
subcontractor (ISO 170 25)		*			*	*	*			

The above results relate only to the items tested.

Chemical tests performed in accordance with ASTM E415 and E1019. Mechanical tests performed in accordance to ASTM E8, E10, E18, E290 and A370. All other tests performed in accordance with the requirements of applicable specifications unless otherwise noted above. We hereby certify that the above test results are representative of those contained in the records of the company.

Any modification to this certificate as provided by Gerdau Ameristeel - Minnesota without the expressed written consent of Gerdau Ameristeel - Minnesota negates the validity of this test report. This report shall not be reproduced except in full, without the expressed written consent of Gerdau Ameristeel Minnesota. Gerdau Ameristeel- Minnesota is not responsible for the inability of this material to meet specific applications.

X Gerdau Ameristeel Minnesota, A2LA Certification #1055-01 Exp. 6/30/06

\* Denotes Testing By Sub-Contractor:  
Metallurgical Services Inc., A2LA Certification #510-01 Exp. 12/31/06  
Stork Twin City Testing, A2LA Certification #1479-01 Exp 12/31/06

Measurement of uncertainty information is available upon request.

SIGNED:

DATE: 04-25-2006

APPROVAL:

QA Approval

*K. Wong*  
Ken Wong

SWORN AND SUBSCRIBED TO BEFORE ME

THIS

DAY

THIS CERTIFICATE

*April 2006*  
*Debra L. Kariesch*  
DEBRA L. KARIESCH  
Notary Public - Minnesota  
My Commission Expires Jan 31, 2010

01/11/06 02:48 FAX 734 848 3303

HSP CERTS

+ CLEVELAND

010

B726



640 Lavoy Road  
Erie, MI 48133  
Phone: 734/848-2915 Fax: 734/848-8734

# CERTIFICATE OF ANALYSIS

CUSTOMER ORDER NO: 13796	CERTIFICATION NO: 2 -205807	SHIPPER NO: 2 -205807	CERTIFIED DATE: 01/11/06
CUSTOMER PART NO: P2085H01	RF	SIZE: .1360 x 5.7340 x	COIL
CUSTOMER:  PRESTIGE STAMPING INC. **  P O BOX 1086  WARREN MI 480901086		GRADE: SAE J403 1035	
		COILING SPECIFICATION: MELTED AND MANUFACTURED IN THE U.S.A.	

ATTENTION:

All units of measurement for chemistry are in weight percent.

COIL NO.	HEAT NUMBER	CHEMISTRY AND MECHANICAL PROPERTIES
EW2501	9501036	C = 0.340 MN= 0.690 P = 0.008 S = 0.003 SI= 0.080 AL= 0.043

RECEIVED

*JA*

THE ABOVE MECHANICAL AND CHEMICAL ANALYSES WERE SUPPLIED  
BY THE PRODUCING MILL OR TESTED ON OUR OWN EQUIPMENT.  
Form No. FQC 001 Rev. 2

*[Signature]*  
Agent for Heidman Steel Products, Inc.

# HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17528

Invoice No. B7010227

Invoice Date 01/05/07

Sales Order K08981

Cert No Inv Line No Item No

Quantity Lot No

Assembly No

Haydon PO

29661 130000 PTF100375

45 AV781A

Heat 425870

A44772

# INSPECTION CERTIFICATE

SET LOT NO. AV781A

**UNYTITE, INC.**

One Unytite Drive  
Peru, Illinois 61354

815-224-2221 — FAX # 815-224-3434



Specification	Size	Quantity
ASTM A490 Type 1		
ASTM A563 Grade DH		
ASTM F436 Type 1	1 - 8 UNC X 3-3/4	7,521 pcs.

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

**BOLT LOT NO.** AV781

Date: Aug. 16, '06

Mechanical Property of Full Size Bolts	Chemical Composition %																			
	Tensile Strength		Proof Load		Hardness		Heat Treatment		IDENTIFICATION		C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100	Mo x 100	B x 10,000
	Load (lbf)	Position of fracture	7270 (lbf)	(Length Method)	HRC	Quench	Temper	Min.	Heat No.											
Spec.	90900	Part of Screw	7270	Max.							30									
	104850									48				Max. 40	Max. 40					
Average 8 pcs	101200	Part of Screw	ALL PASS		34.8	1580	1004	425870		39	26	95	9	12	9	7	82	21	1	

**NUT LOT NO.** AW161

Mechanical Property of Full Size Nuts	Chemical Composition %																		
	Hardness		Proof Load		Heat Treatment		IDENTIFICATION		C x 100		Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100		
	After 24 hr x 1000° F	HRB	Min.	HRB 89	Quench	Temper	Min.	Heat No.											
Spec.	24-38		1060	50						20				Max. 50	Max. 40				
Mean/5pcs	27.9		ALL PASS	1562	1211	M19920		46	24	81	12	31	16	7	15				

**WASHER LOT NO.** WB7726

Mechanical Property of Full Size Washers	Chemical Composition %										Fastener Tension								
	Hardness		Proof Load		Heat Treatment		IDENTIFICATION		C x 100		Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100	Spec. (lbf.)	Min.
	30-45	HRB	Min.	HRB 89	Quench	Temper	Min.	Heat No.											
Spec.	30-45		950	1036						34	8	69	8	3					
Mean/5 Pcs.	41.5		950	1036						3	8	69	8	3					

Material used for the bolt, nut and washer were melted & manufactured in the USA. The product was manufactured in the USA to ASTM specifications. The bolt and nut are manufactured by Unytite. We hereby certify that the material described has been manufactured and inspected satisfactory with requirement of the above specification.

158-17-06

Chief of Quality Assurance Section

Thread Accuracy (Bolt & Nut)	REMARKS
Bolt ASME B1.1 Class 2A Nut ANSI B1.1 Class 2B	THESE BOLTS HAVE BEEN MAGNETIC PARTICLE INSPECTION IN ACCORDANCE WITH THE REQUIREMENTS OF SPECIFICATION ASTM A490

LOAD



# CHARTER STEEL

A Division of  
Charter Manufacturing Company, Inc.

## CHARTER STEEL TEST REPORT Reverse Has Text And Codes

1658 Cold Springs Road  
Saukville, Wisconsin 53080

(262) 268-2400

1-800-437-8789

FAX (262) 268-2570

**UNYTITE, INC.**  
**ONE UNYTITE DRIVE**  
**PERU, IL 61354-**  
**Attn: ATTEN: JEAN MARGHERIO**

Cust. P.O.	33617
Cust Part#	C4140SCO.984A
Charter Sales Order	211781
Heat #	425870
Ship Lot #	490321
Grade#	4140 A SK FG RHQ
Process	DFSAR
Finish Size	0.984

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed below and on the reverse side, and that it satisfies those requirements.

**Test Results of Heat Lot# 425870**

Lab Code: 7388

Chemistry	C	MN	P	S	SI	NI	CR	MO	CU	SN	V
Wt%	0.39	0.95	0.009	0.012	0.260	0.07	0.82	0.21	0.09	0.008	0.001
	AL	N	B	TI	NB						
	0.024	0.0070	0.0001	0.001	0.002						

CHEM. DEVIATION EXT.-GREEN = N/R

**Test Results of Rolling Lot # 342223**

QC DEVIATION EXT.-GREEN = N/R

**Test Results of Processing Lot # 490321**

	# of Tests	Min Value	Max Value	Mean Value	
TENSILE (KSI)	3	92.7	92.9	92.9	TENSILE LAB = 0358-02
REDUCTION OF AREA (%)	3	59	60	59	RA LAB = 0358-02
ROCKWELL B (HRBW)	3	92	94	93	RB LAB = 0358-02
WIRE SIZE (Inches)	10	0.982	0.983	0.982	
WIRE OUT OF ROUND (Inches)	10	0.000	0.001	0.000	

NUM DECARB = 2    FREE FERRITE DECARB = 0.000    FREE FERR & PARTIAL DECARB = 0.001  
CP SPHERO % LAB = 0358-02    NUM SPHERO = 2    SPHERODIZATION (%) = 82.5  
QC DEVIATION EXT.-PROCESSED = N/R

Specifications:      Meets customer specifications with any applicable Charter Steel exceptions for the following customer documents:  
Customer Document = UNYTITE RMS-003      Revision = 2      Dated =

Additional Comments:

Charter Steel  
Saukville, WI, USA



Tim Leahy  
Manager of Quality Assurance  
06/27/2006



The following statements are applicable to the material described on the front of this Test Report:

1. Except as noted, the steel supplied for this order was melted, rolled and processed in the United States.
2. Mercury was not used during the manufacture of this product; nor was the steel contaminated with mercury during processing.
3. Unless directed by the customer, there are no welds in any of the coils produced for this order.
4. The laboratory that generated the analytical or test results can be identified by the following key:

Certificate Number	Lab Code	Laboratory		Address
0358-01	7388	<b>CSMD</b>	Charter Steel Melting Division	1658 Cold Springs Road, Saukville, WI 53080
0358-02	8171	<b>CSR/D/CSPD</b>	Charter Steel Rolling/Processing Division	1658 Cold Springs Road, Saukville, WI 53080
0358-03	123633	<b>P4</b>	Charter Steel Ohio Processing Division	6255 US Highway 23, Risingsun, OH 43457
0358-04	125544	<b>CSC</b>	Charter Steel Cleveland	4300 E. 49 <sup>th</sup> St., Cuyahoga Heights, OH 44125-1004
*	*	--	Subcontracted test performed by laboratory not in Charter Steel system	

5. When run by a Charter Steel laboratory, the following tests were performed according to the latest revisions of the specifications listed below, as noted in the Charter Steel Laboratory Quality Manual:

Test	Possible Laboratory	Specification
Chemistry Analysis	CSMD	ASTM E415; ASTM E1019
Macroetch	CSMD	ASTM E381
Hardenability (Jominy)	CSMD	ASTM A255; JIS G0561
Grain Size	CSMD	ASTM E112
Tensile Test	CSR/D/CSPD, P4, CSC	ASTM E8; ASTM A370
Rockwell Hardness	CSR/D/CSPD, P4, CSC	ASTM E18; ASTM A370
Microstructure (spheroidization)	CSR/D/CSPD, P4	ASTM A892
Cleanliness	CSR/D/CSPD, CSC	ASTM E45

Charter Steel has been accredited to perform all of the above tests by the American Association for Laboratory Accreditation (A2LA). These accreditations expire 01/31/07.

All other test results associated with a Charter Steel laboratory that appear on the front of this report, if any, were performed according to documented procedures developed by Charter Steel and are not accredited by A2LA.

6. The test results on the front of this report are the true values measured on the samples taken from the production lot. They do not apply to any other sample.
7. This test report cannot be reproduced or distributed except in full without the written permission of Charter Steel. The primary customer whose name and address appear on the front of this form may reproduce this test report, subject to the following restrictions:
  - It may be distributed only to their customers
  - Both sides of all pages must be reproduced in full
8. This certification is given subject to the terms and conditions of sale provided in Charter Steel's acknowledgment (designated by our Purchase Order number) to the customer's purchase order. Both Purchase Order numbers appear on the front page of this Report.
9. Where the customer has provided a specification, the results on the front of this test report conform to that specification unless otherwise noted on this test report.



**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
35869	B1045SC12500	M19920	39507 101	7/11/06

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 1/4" RND	24' 10 1/2"

SAE 1045; ASTM E381-91

## CUSTOMER SPECIFICATIONS

**CHEMICAL ANALYSIS - (BAR AVERAGE)**

C	Mn	P	S	Si	Ni	Cr	Mo	Cu	Sn	Al
0.46	0.81	0.012	0.031	0.24	0.07	0.15	0.04	0.16	0.007	0.002
V	Nb									
0.054	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= 0.004

PAGE 1

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

MacSteel-Arkansas MacSteel-Monroe MacSteel-Michigan **Chris Easter**

Quality Assurance Representative

CONTINUED ON PAGE 2

**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
35869	B1045SC12500	M19920	39507 101	7/11/06

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 1/4" RND	24' 10 1/2"

CUSTOMER SPECIFICATIONS  
SAE 1045; ASTM E381-91

REDUCTION RATIO

RATIO= 29.3 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-Arkansas   
MacSteel-Michigan

MacSteel-Monroe

*Chris Easter*

Quality Assurance Representative

01/11/06 02:48 FAX 734 848 3303

HSP CERTS

+ CLEVELAND

010

B726



640 Lavoy Road  
Erie, MI 48133  
Phone: 734/848-2915 Fax: 734/848-8734

# CERTIFICATE OF ANALYSIS

CUSTOMER ORDER NO: 13796	CERTIFICATION NO: 2 -205807	SHIPPER NO: 2 -205807	CERTIFIED DATE: 01/11/06
CUSTOMER PART NO: P2085H01	RF	SIZE: .1360 <sub>x</sub> 5.7340 <sub>x</sub> COIL	
CUSTOMER:  PRESTIGE STAMPING INC. **  P O BOX 1086  WARREN MI 480901086		GRADE: SAE J403 1035	
		COATING SPECIFICATION: MELTED AND MANUFACTURED IN THE U.S.A.	

ATTENTION:

~~All units of measurement for chemistry are in weight percent.~~

COIL NO.	HEAT NUMBER	CHEMISTRY AND MECHANICAL PROPERTIES
EW2501	9501036	C = 0.340 MN= 0.690 P = 0.008 S = 0.003 SI= 0.080 AL= 0.043

RECEIVED

*JK*

THE ABOVE MECHANICAL AND CHEMICAL ANALYSES WERE SUPPLIED  
BY THE PRODUCING MILL OR TESTED ON OUR OWN EQUIPMENT.  
Form No. FQC 001 Rev. 2

*[Signature]*  
Agent for Heidman Steel Products, Inc.

# HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17528

Invoice No. B7010227

Invoice Date 01/05/07

Sales Order K08981

Cert No 30218

Inv Line No 140000

Item No PTF100350

Quantity 70

Lot No BB021A

Heat 418210

Assembly No

Haydon PO

A44772

# INSPECTION CERTIFICATE

SET LOT NO. BB021A

**UNYTITE, INC.**

One Unytite Drive  
Peru, Illinois 61354

815-224-2221 — FAX # 815-224-3434



Specification	Size	Quantity
ASTM A490 F2280 Type 1 ASTM A563 Grade DH ASTM F436 Type 1	1 - 8 UNC X 3-1/2	8,723 pcs.

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

Date: Oct. 09, '06

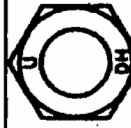
BOLT LOT NO. BB021

Mechanical Property of Full Size Bolts				Heat Treatment		Chemical Composition %									
Tensile Strength	Proof Load 72700 (Length Method)	Hardness	HRC	°F (°C)		C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100	Mo x 100	B x 10,000
				Quench	Temper										
Spec. 90900	Max. 72700			Min. 800		30			Max. 40						
104850	+/- 0.0005 in.					48				Max. 40					
Average 8 pcs 100600	ALL PASS	34.9		1580	1013	41	25	85	8	12	9	5	86	21	2



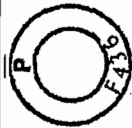
NUT LOT NO. AX071

Mechanical Property of Full Size Nuts				Heat Treatment		Chemical Composition %							
Hardness (HRC)	Hardness After 24 hr x 1000° F HRB	Proof Load (Lbf)	Min. HRB 89	°F (°C)		C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100
				Quench	Temper								
Spec. 24 - 38		106050		Min. 850		20			Max. 40				
Mean/5pcs 27.8	—	ALL PASS		1211	1562	45	22	69	8	30	29	11	14



WASHER LOT NO. WB8266

Mechanical Property of Full Size Washers				Heat Treatment		Chemical Composition %							
Hardness (HRC)	Hardness After 24 hr x 1000° F HRB	Proof Load (Lbf)	Min. HRB 89	°F (°C)		C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100
				Quench	Temper								
Spec. 38 - 45		106050		Min. 850		20			Max. 40				
Mean/5 Pcs. 42.5	—	ALL PASS		1211	1562	45	22	69	8	30	29	11	14



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

Chief of Quality Assurance Section

10/18/06

Material used for the bolt, nut and washer were melted & manufactured in the USA. The product was manufactured in the USA to ASTM specifications. The bolt and nut are manufactured by Unytite. We hereby certify that the material described has been manufactured and inspected satisfactory with requirement of the above specification.

*[Signature]*

Thread Accuracy	
Bolt	ASME B1.1 Class 2A
Nut	ASME B1.1 Class 2B

REMARKS
THESE BOLTS HAVE BEEN MAGNETIC PARTICLE INSPECTION IN ACCORDANCE WITH THE REQUIREMENTS OF SPECIFICATION ASTM A490

### Fastener Tension

Fastener Tension	
Spec. (lbf)	67200
Mean / 5 sets.	75732
Standard Deviation	2377

LOAD



# CHARTER STEEL

## CHARTER STEEL TEST REPORT Reverse Has Text And Codes

A Division of  
Charter Manufacturing Company, Inc.

1658 Cold Springs Road  
Saukville, Wisconsin 53080  
(262) 268-2400  
1-800-437-8789  
FAX (262) 268-2570

UNYTITE, INC.  
ONE UNYTITE DRIVE  
PERU, IL 61354-  
Attn: ATTN: JEAN MARGHERIO

Cust. P.O.	33448
Cust Part#	C4140SCO.984A
Charter Sales Order	210714
Heat #	418210
Ship Lot #	485995
Grade#	4140 A SK FG RHQ
Process	DFSAR
Finish Size	0.984

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed below and on the reverse side, and that it satisfies those requirements.

### Test Results of Heat Lot# 418210

LAB CODE: 7388

Chemistry	C	MN	P	S	SI	NI	CR	MO	CU	SN	V
Wt%	0.41	0.85	0.008	0.012	0.250	0.05	0.86	0.21	0.09	0.008	0.001

	AL	N	B	TI	NB
	0.023	0.0070	0.0002	0.002	0.002

CHEM. DEVIATION EXT.-GREEN = N/R

### Test Results of Rolling Lot # 339035

QC DEVIATION EXT.-GREEN = N/R

### Test Results of Processing Lot # 485995

	# of Tests	Min Value	Max Value	Mean Value
TENSILE (KSI)	3	93.1	93.5	93.4
REDUCTION OF AREA (%)	3	61	62	61
ROCKWELL B (HRBW)	3	79	83	82
WIRE SIZE (Inches)	9	0.982	0.983	0.982
WIRE OUT OF ROUND (Inches)	9	0.000	0.001	0.000

TENSILE LAB = 0358-02  
RA LAB = 0358-02  
RB LAB = 0358-02

NUM DECARB = 2      FREE FERRITE DECARB = 0.000      FREE FERR & PARTIAL DECARB = 0.000  
CP SPHERO % LAB = 0358-02      NUM SPHERO = 2      SPHERODIZATION (%) = 82.5  
QC DEVIATION EXT.-PROCESSED = N/R

Specifications:      Meets customer specifications with any applicable Charter Steel exceptions for the following customer documents:  
Customer Document = UNYTITE RMS-003      Revision = 2      Dated =

Charter Steel  
Saukville, WI, USA

Fax number: ( )      Rem: Load1,Mail0,Fax0



Tim Leahy  
Manager of Quality Assurance  
05/10/2006

The following statements are applicable to the material described on the front of this Test Report:

1. Except as noted, the steel supplied for this order was melted, rolled and processed in the United States.
2. Mercury was not used during the manufacture of this product; nor was the steel contaminated with mercury during processing.
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4. The laboratory that generated the analytical or test results can be identified by the following key:

Certificate Number	Lab Code	Laboratory		Address
0358-01	7388	<b>CSMD</b>	Charter Steel Melting Division	1658 Cold Springs Road, Saukville, WI 53080
0358-02	8171	<b>CSRD/CSPD</b>	Charter Steel Rolling/Processing Division	1658 Cold Springs Road, Saukville, WI 53080
0358-03	123633	<b>P4</b>	Charter Steel Ohio Processing Division	6255 US Highway 23, Risingsun, OH 43457
0358-04	125544	<b>CSC</b>	Charter Steel Cleveland	4300 E. 49 <sup>th</sup> St., Cuyahoga Heights, OH 44125-1004
*	*	--	Subcontracted test performed by laboratory not in Charter Steel system	

5. When run by a Charter Steel laboratory, the following tests were performed according to the latest revisions of the specifications listed below, as noted in the Charter Steel Laboratory Quality Manual:

Test	Possible Laboratory	Specification
Chemistry Analysis	CSMD	ASTM E415; ASTM E1019
Macroetch	CSMD	ASTM E381
Hardenability (Jominy)	CSMD	ASTM A255; JIS G0561
Grain Size	CSMD	ASTM E112
Tensile Test	CSRD/CSPD, P4, CSC	ASTM E8; ASTM A370
Rockwell Hardness	CSRD/CSPD, P4, CSC	ASTM E18; ASTM A370
Microstructure (spheroidization)	CSRD/CSPD, P4	ASTM A892
Cleanliness	CSRD/CSPD, CSC	ASTM E45

Charter Steel has been accredited to perform all of the above tests by the American Association for Laboratory Accreditation (A2LA). These accreditations expire 01/31/07.

All other test results associated with a Charter Steel laboratory that appear on the front of this report, if any, were performed according to documented procedures developed by Charter Steel and are not accredited by A2LA.

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9. Where the customer has provided a specification, the results on the front of this test report conform to that specification unless otherwise noted on this test report.







**GERDAU AMERISTEEL**

**St Paul Mill**

M621768

P.O Box 64189  
1678 Red Rock Road  
Saint Paul, Minnesota 55164

Heat #:	S74339
Size:	1-1/4"
Product:	Round Bar
Grade:	C1045M23FC
Date Rolled:	01-30-2006
P.O	33664
M.O #:	600633203
lgth	24'10"

# CERTIFIED TEST REPORT

## CHEMICAL ANALYSIS (WT %)

C	Mn	P	S	Si	Sn	Cu	Ni	Cr	Mo	Cb	V	Co	Al	Ti	Ca ppm	N ppm
0.45	.69	0.008	0.030	0.22	0.022	0.29	0.11	0.14	0.03	0.001	0.027	0.009	0.003	0.0025	18	88

MATERIAL 100% MELTED AND ROLLED IN THE USA. MANUFACTURING PROCESSES FOR THIS STEEL, WHICH MAY INCLUDE SCRAP MELTED IN AN ELECTRIC ARC FURNACE AND HOT ROLLING, HAVE BEEN PERFORMED AT GERDAU AMERISTEEL MINNESOTA, 1678 RED ROCK ROAD, SAINT PAUL MINNESOTA, USA. ALL PRODUCT PRODUCED FROM STRAND CAST BILLETS. NO WELD REPAIRMENT PERFORMED. STEEL NOT EXPOSED TO MERCURY OR ANY LIQUID ALLOY WHICH IS LIQUID AT AMBIENT TEMPERATURES DURING PROCESSING OR WHILE IN GERDAU AMERISTEEL MINNESOTA POSSESSION.

## 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

## MECHANICAL TEST REPORT

SPECIMEN AREA (in <sup>2</sup> )	YIELD (Kips)	YIELD (Ksi)	TENSILE (Kips)	TENSILE (Ksi)	GAUGE LENGTH (in)	% ELONG	BEND	% R.A.

### Additional Specifications/Comments:

A576-90b (2000)

A29/A29M-05

Quality Program Manual Rev. 1 dtd 6/10/05

Grain Size: <input type="text" value="Fine"/>	Reduction Ratio: <input type="text" value="24.6:1"/>	C.E Per: <input type="text"/>	As Rolled surface Hardness HBW   HRC Test 1: <input type="text"/> Test 2: <input type="text"/>
Coding: <input type="text"/>	D.I: <input type="text" value="1.46"/> in. Ms: <input type="text" value="608.1"/> Deg F.	C.E: <input type="text"/>	

### CHARPY IMPACT TEST

*	Test 1	Test 2
Temp (F)		
ft-Ib 1		
ft-Ib 2		
ft-Ib 3		

ASTM E45 is not a laboratory accredited test.

### Micro Clean Average

At:  Ah:  Bt:  Bh:  Ct:  Ch:  Dt:  Dh:  S-Rating  O-Rating:

Macro Etch:

### ASTM Test Method

Accredited to:	ASTM A370	ASTM E8	ASTM E10	ASTM E18	ASTM E23	ASTM E112	ASTM E255	ASTM E290	ASTM E415	ASTM E1019
ISO 17025	X	X	X	X				X	X	X
subcontractor (ISO 170 25)		*			*	*	*			

The above results relate only to the items tested.

Chemical tests performed in accordance with ASTM E415 and E1019. Mechanical tests performed in accordance with ASTM E8, E10, E18, E290 and A370. All other tests performed in accordance with the requirements of applicable specifications unless otherwise noted above. We hereby certify that the above test results are representative of those contained in the records of the company.

X Gerdau Ameristeel Minnesota, A2LA Certification #1055-01 Exp. 6/30/06

\* Denotes Testing By Sub-Contractor:  
Metallurgical Services Inc., A2LA Certification #510-01 Exp. 12/31/06  
Stork Twin City Testing, A2LA Certification #1479-01 Exp 12/31/06

Measurement of uncertainty information is available upon request.

Any modification to this certificate as provided by Gerdau Ameristeel - Minnesota without the expressed written consent of Gerdau Ameristeel - Minnesota negates the validity of this test report. This report shall not be reproduced except in full, without the expressed written consent of Gerdau Ameristeel Minnesota. Gerdau Ameristeel - Minnesota is not responsible for the inability of this material to meet specific applications.

SIGNED: \_\_\_\_\_

DATE: 07-31-2006

APPROVAL: \_\_\_\_\_

QA Approval

*K. Wong*

Ken Wong

SWORN AND SUBSCRIBED TO BEFORE ME

THIS 31 DAY July 2006

*Debra L. Kariesch*  
THIS CERTIFICATE IS NOT VALID UNLESS REQUESTED.



DEBRA L. KARIESCH  
Notary Public-Minnesota  
My Commission Expires Jan 31, 2010

B8266



640 Lavoy Road  
Erie, MI 48133  
Phone: 734/848-2915 Fax: 734/848-8734

# CERTIFICATE OF ANALYSIS

CUSTOMER ORDER NO: 14050	CERTIFICATION NO: 2 -210784	SHIPPER NO: 2 -210784	CERTIFIED DATE: 05/10/06
CUSTOMER PART NO: P2085H00	RF	SIZE: .1360 x 5.7340 x	COIL
CUSTOMER:  PRESTIGE STAMPING INC. **  P O BOX 1086  WARREN MI 480901086		GRADE: SAE J403 1035	
MELTED AND MANUFACTURED IN THE U.S.A.			

ATTENTION:

~~All units of measurement for chemistry are in weight percent.~~

COIL NO.	HEAT NUMBER	CHEMISTRY AND MECHANICAL PROPERTIES
HG4401	9402318	C = 0.340 MN= 0.750 P = 0.010 S = 0.004 SI= 0.070 AL= 0.054

RECEIVED

MAY 15 2006

*JL*

THE ABOVE MECHANICAL AND CHEMICAL ANALYSES WERE SUPPLIED BY THE PRODUCING MILL OR TESTED ON OUR OWN EQUIPMENT.  
Form No. FQC 001 Rev. 2

Agent for Heidman Steel Products, Inc.

# HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17528

Invoice No. B7010227

Invoice Date 01/05/07

Sales Order K08981

Cert No Inv Line No Item No

Quantity Lot No

Assembly No Haydon PO

29082 150000 PTF100325

10 AT471B

Heat 418210

A43578

# INSPECTION CERTIFICATE

SET LOT NO. AT471B



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

Specification	Size	Quantity
ASTM A490 Type 1	1 - 8 UNC X 3-1/4	21,205 pcs.
ASTM A563 Grade DH		
ASTM F436 Type 1		

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

**BOLT LOT NO.** AT471 **Date:** Jun. 29, '09

Mechanical Property of Full Size Bolts				Chemical Composition %																		
Tensile Strength	Proof Load (Lbf)	Hardness	HRC	Heat Treatment		IDENTIFICATION																
				Quench	Temper	C	Si	Mn	P	S	Cu	Ni	Cr	Mo	B							
90900	72700																					
104850																						
100600																						
Average 8 pcs	ALL PASS	35.3		1580	1004	418210	30	25	85	8	12	9	5	86	21	2						

**NUT LOT NO.** A0711

Mechanical Property of Full Size Nuts				Chemical Composition %																			
Hardness (HRC)	Hardness After 24 hr x 1000° F HRB	Proof Load (Lbf)	HRC	Heat Treatment		IDENTIFICATION																	
				Quench	Temper	C	Si	Mn	P	S	Cu	Ni	Cr										
24 - 38		106050																					
29.2		ALL PASS																					
Mean/5 pcs		1562		1085	599494	46	22	62	8	21	13	6	15										

**WASHER LOT NO.** WB7528

Mechanical Property of Full Size Washers				Chemical Composition %																		
Hardness (HRC)	Hardness	Proof Load (Lbf)	HRC	Heat Treatment		IDENTIFICATION																
				Quench	Temper	C	Si	Mn	P	S	Cu	Ni	Cr									
38 - 45		9500908																				
41.5		34																				
Mean/5 Pcs		1085		1085	599494	46	22	62	8	21	13	6	15									

Material used for the bolt, nut and washer were melted & manufactured in the USA. The product was manufactured in the USA to ASTM specifications. The bolt and nut are manufactured by Unytite. We hereby certify that the material described has been manufactured and inspected satisfactory with requirement of the above specification.

Chief of Quality Assurance Section

*[Signature]*

Thread Accuracy (Bolt & Nut)	REMARKS
Bolt ASME B1.1 Class 2A Nut ANSI B1.1 Class 2B	THESE BOLTS HAVE BEEN MAGNETIC PARTICLE INSPECTION IN ACCORDANCE WITH THE REQUIREMENTS OF SPECIFICATION ASTM A490

### Fastener Tension

Fastener Tension	Fastener Tension
Spec. (lbf.)	Min.
67000	67000
81128	81128
3954	3954

NOTARY PUBLIC - STATE OF ILLINOIS  
 MY COMMISSION EXPIRES: 10/18/09  
 Jean MARGHERIO  
 OFFICIAL SEAL  
 JEAN MARGHERIO  
 U.S. - 30 - 06

LOAD



# CHARTER STEEL

## CHARTER STEEL TEST REPORT Reverse Has Text And Codes

A Division of  
Charter Manufacturing Company, Inc.

1658 Cold Springs Road  
Saukville, Wisconsin 53080  
(262) 268-2400  
1-800-437-8789  
FAX (262) 268-2570

UNYTITE, INC.  
ONE UNYTITE DRIVE  
PERU, IL 61354-  
Attn: ATTEN: JEAN MARGHERIO

Cust. P.O.	33448
Cust Part#	C4140SCO.984A
Charter Sales Order	210714
Heat #	418210
Ship Lot #	485995
Grade#	4140 A SK FG RHQ
Process	DFSAR
Finish Size	0.984

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed below and on the reverse side, and that it satisfies those requirements.

### Test Results of Heat Lot# 418210

LAB CODE: 7388

Chemistry	C	MN	P	S	SI	NI	CR	MO	CU	SN	V
Wt%	0.41	0.85	0.008	0.012	0.250	0.05	0.86	0.21	0.09	0.008	0.001
	AL	N	B	TI	NB						
	0.023	0.0070	0.0002	0.002	0.002						

CHEM. DEVIATION EXT.-GREEN = N/R

### Test Results of Rolling Lot # 339035

QC DEVIATION EXT.-GREEN = N/R

### Test Results of Processing Lot # 485995

	# of Tests	Min Value	Max Value	Mean Value	
TENSILE (KSI)	3	93.1	93.5	93.4	TENSILE LAB = 0358-02
REDUCTION OF AREA (%)	3	61	62	61	RA LAB = 0358-02
ROCKWELL B (HRBW)	3	79	83	82	RB LAB = 0358-02
WIRE SIZE (Inches)	9	0.982	0.983	0.982	
WIRE OUT OF ROUND (Inches)	9	0.000	0.001	0.000	

NUM DECARB = 2      FREE FERRITE DECARB = 0.000      FREE FERR & PARTIAL DECARB = 0.000  
CP SPHERO % LAB = 0358-02      NUM SPHERO = 2      SPHERODIZATION (%) = 82.5  
QC DEVIATION EXT.-PROCESSED = N/R

Specifications: Meets customer specifications with any applicable Charter Steel exceptions for the following customer documents:  
Customer Document = UNYTITE RMS-003      Revision = 2      Dated =

Charter Steel  
Saukville, WI, USA

Fax number: ( )      Rem: Load1,Mail0,Fax0



Tim Leahy  
Manager of Quality Assurance  
05/10/2006

The following statements are applicable to the material described on the front of this Test Report:

1. Except as noted, the steel supplied for this order was melted, rolled and processed in the United States.
2. Mercury was not used during the manufacture of this product; nor was the steel contaminated with mercury during processing.
3. Unless directed by the customer, there are no welds in any of the coils produced for this order.
4. The laboratory that generated the analytical or test results can be identified by the following key:

Certificate Number	Lab Code	Laboratory		Address
0358-01	7388	<b>CSMD</b>	Charter Steel Melting Division	1658 Cold Springs Road, Saukville, WI 53080
0358-02	8171	<b>CSRD/CSPD</b>	Charter Steel Rolling/Processing Division	1658 Cold Springs Road, Saukville, WI 53080
0358-03	123633	<b>P4</b>	Charter Steel Ohio Processing Division	6255 US Highway 23, Risingsun, OH 43457
0358-04	125544	<b>CSC</b>	Charter Steel Cleveland	4300 E. 49 <sup>th</sup> St., Cuyahoga Heights, OH 44125-1004
*	*	--	Subcontracted test performed by laboratory not in Charter Steel system	

5. When run by a Charter Steel laboratory, the following tests were performed according to the latest revisions of the specifications listed below, as noted in the Charter Steel Laboratory Quality Manual:

Test	Possible Laboratory	Specification
Chemistry Analysis	CSMD	ASTM E415; ASTM E1019
Macroetch	CSMD	ASTM E381
Hardenability (Jominy)	CSMD	ASTM A255; JIS G0561
Grain Size	CSMD	ASTM E112
Tensile Test	CSRD/CSPD, P4, CSC	ASTM E8; ASTM A370
Rockwell Hardness	CSRD/CSPD, P4, CSC	ASTM E18; ASTM A370
Microstructure (spheroidization)	CSRD/CSPD, P4	ASTM A892
Cleanliness	CSRD/CSPD, CSC	ASTM E45

Charter Steel has been accredited to perform all of the above tests by the American Association for Laboratory Accreditation (A2LA). These accreditations expire 01/31/07.

All other test results associated with a Charter Steel laboratory that appear on the front of this report, if any, were performed according to documented procedures developed by Charter Steel and are not accredited by A2LA.

6. The test results on the front of this report are the true values measured on the samples taken from the production lot. They do not apply to any other sample.
7. This test report cannot be reproduced or distributed except in full without the written permission of Charter Steel. The primary customer whose name and address appear on the front of this form may reproduce this test report, subject to the following restrictions:
  - It may be distributed only to their customers
  - Both sides of all pages must be reproduced in full
8. This certification is given subject to the terms and conditions of sale provided in Charter Steel's acknowledgment (designated by our Purchase Order number) to the customer's purchase order. Both Purchase Order numbers appear on the front page of this Report.
9. Where the customer has provided a specification, the results on the front of this test report conform to that specification unless otherwise noted on this test report.



# TEST REPORT

# MITTAL

REQ., JOB, CONTRACT NO.		PURCHASE ORDER NO. 32139	
V E MITTAL STEEL USA N INDIANA HARBOR BAR PRODUCTS D 3300 DICKEY ROAD O R EAST CHICAGO, INDIANA 46312	SHIPPER'S NO.	BILL ORDER NO. 211129	
	REPORT PRINT DATE 09/24/2005		

TEST REPORT TO:  
UNYTITE

SHIP TO:  
UNYTITE, INC

1 UNYTITE DR

ONE UNYTITE DRIVE

PERU IL

61354

PERU IL, 61354

CMS (REG TM) SQ HOT ROLLED ROUNDS SAE 1045 MOD /RMS-009 (03/09/01) 5 / FINE  
GRAIN/CWQ/RESTRICTED CHEMICAL REQ/RESTRICTED MAX INCIDENTAL ELEMENTS/MRR FOR  
SPEC SURF & CLEAN/SPECIAL STRAIGHTENED/EDDY CURRENT TESTED/

RND 1.2500 IN X 24 FT 10 1/2 IN

HEAT: 599494 C : 0.46 Mn: 0.62 P : .008 S : .021 Si: 0.22  
Cu: .13 Ni: 0.06 Cr: 0.15 Mo: .03 Al: .025  
Cb: .001 V : .004 N : .009 Ti: .002

Ni+Cr = 0.21

MICROCLEANLINESS per A (SULF) B (ALUM) C (SILI) D (OXID)  
ASTM E45 METHOD A 2.0T 0.0H 0.0T 0.0H 0.0T 0.0H 1.0T 0.0H

DECARBURIZATION: A.A.D. 0.006"

PART NUMBER: CSRB1045M1250

MATERIAL MEETS AUSTENITIC GRAIN SIZE REQUIREMENT OF 5 OR FINER  
MATERIAL IS 100% SMELT/MELT AND MANUFACTURED IN THE U.S.A.

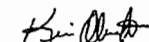
PAMELA M GOLON  
NOTARY PUBLIC STATE OF INDIANA  
LAKE COUNTY  
MY COMMISSION EXP. MAR. 25, 2010



NOTARY

Unless otherwise stated; the steel described herein was manufactured, inspected and tested in accordance with the requirements of the contract or purchase order and conform to those requirements. The steel is free of surface mercury contamination at the time of shipment based on present methods and detection equipment. No mercury, radium or alpha source materials were used in the production of this steel. This steel has not been welded nor repair welded. Heat analyses and test results marked with an asterisk (\*) were reported by a Mittal Steel USA, Indiana Harbor Bar Products approved third party. The "+" sign at the beginning of any line indicates an amendment to that line from a previously issued report for the same heat/order. All tests were performed by Mittal Steel USA, Indiana Harbor Bar Products. in accordance with the following, unless otherwise specified: Chemistry per ASTM E415 & E1019; Hardenability per ASTM A255 and SAE J406; Macrostructure per ASTM E381 & E1180; Mechanical Properties per ASTM A370, E8 & E23; Hardness per ASTM E10 & E18; and SAE J417; Cleanliness per SAE J421; Microstructure/Microcleanliness per ASTM E3, E45, E112 & E1077, J419 & J422, and JIS G0555; NDT per ASNT-TC-1A, Rounding per ASTM E29. Tested per most recent standard, unless otherwise noted. We hereby certify that the heat and/or test results in this report are applicable only to the items described herein, and are correct as contained in the records of the Company. This document shall not be reproduced except in full.

The management system governing the manufacture of this product is ISO/TS 16949:2002 certified, Certificate No. 38325; ISO 14001:1996 certified, Certificate No. 36274 and A2LA accredited in the fields of: Chemical, Mechanical and Environmental Testing - Certificate Nos. 111.01, 111.02 and 111.03

  
Kevin R. Oberembt  
Manager - Quality Department

11/02/2005 01:27 FAX 734 848 3303

HSP CERTS

CLEVELAND

001

B7528

# CERTIFICATE OF ANALYSIS



640 Lavoy Road  
Erie, MI 48133  
Phone: 734/848-2915 Fax: 734/848-8734

CUSTOMER ORDER NO: 13620	CERTIFICATION NO: 2 -203917	SHIPPER NO: 2 -203917	CERTIFIED DATE: 11/02/05
CUSTOMER PART NO: P2085H00	DH	SIZE: .1360 <sub>x</sub> 5.7340 <sub>x</sub>	COIL

CUSTOMER:

PRESTIGE STAMPING INC. \*\*  
P O BOX 1086  
WARREN MI 480901086

GRADE  
SAE J403 1035

COILING SPECIFICATION:  
MELTED AND MANUFACTURED IN THE U.S.A.

ATTENTION:

~~All units of measurement for chemistry are in weight percent.~~

COIL NO. HEAT NUMBER CHEMISTRY AND MECHANICAL PROPERTIES

EU5101 9500908 C = 0.340 MN= 0.710 P = 0.010 S = 0.003 SI= 0.100  
AL= 0.050

COMMENT:\*\* MILL CERTIFICATION WITH LOAD \*\*

## RECEIVED

NOV 02 2005

Agent for Heidman Steel Products, Inc.

THE ABOVE MECHANICAL AND CHEMICAL ANALYSES WERE SUPPLIED BY THE PRODUCING MILL OR TESTED ON OUR OWN EQUIPMENT.  
Form No. FQC 001 Rev. 2



HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17528

Invoice No. B7010227

Invoice Date 01/05/07

Sales Order K08981

Cert No Inv Line No Item No

Quantity Lot No

Assembly No

Haydon PO

29944 160000 PTF100300

20 AM311A

Heat 411390

PS01888

# INSPECTION CERTIFICATE

**UNYRITE, INC.**

One Unyrite Drive  
Peru, Illinois 61354

815-224-2221 — FAX # 815-224-3434



AM311A

SET LOT NO. \_\_\_\_\_

Specification	Size	Quantity
ASTM A490 Type 1 ASTM A563 Grade DH ASTM F436 Type 1	1 - 8 UNC X 3	21,925 pcs.

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

Date: Apr. 26, '06

BOLT LOT NO. AM311

Spec.	Mechanical Property of Full Size Bolts				IDENTIFICATION	Chemical Composition %											
	Tensile Strength	Proof Load 72700 (Length Method)	Hardness			Heat Treatment		C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100	Mo x 100	B x 10,000
			Load (lbf)	Position of fracture		HRC	Quench										
90900	Max.																
104850	Part of Screw	+/- 0.0005 in.															
98075	Part of Screw	ALL PASS	35.0	1580	977	411390	41	22	88	13	11	9	5	83	16	3	

NUT LOT NO. AK571

Spec.	Hardness (HRC)	Hardness After 24 hr x 1000° F	Proof Load (Lbf)	Heat Treatment	IDENTIFICATION	Chemical Composition %											
						Quench	Temper	C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100		
																Min.	Max.
24 - 38	HRB 89	106050	106050	800													
28.3	—	ALL PASS	1562	941	690675	45	18	67	8	21	12	5	7				

WASHER LOT NO. WB7527

Spec.	Hardness (HRC)	IDENTIFICATION	Chemical Composition %							Fastener Tension		REMARKS						
			C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100	Spec. (lbf.)		Min.					
														Max.	Mean / 6 sets.	Standard Deviation		
38 - 45																		
43.0		9400563	35	4	75	14	3	50	40	3	79402	5852						

Material used for the bolt, nut and washer were melted & manufactured in the USA. The product was manufactured in the USA to ASTM specifications. The bolt and nut are manufactured by Unyrite. We hereby certify that the material described has been manufactured and inspected satisfactory with requirement of the above specification.

Chief of Quality Assurance Section

05-01-06

Thread Accuracy (Bolt & Nut)  
Bolt ASME B1.1 Class 2A  
Nut ANSI B1.1 Class 2B

THESE BOLTS HAVE BEEN MAGNETIC PARTICLE INSPECTION IN ACCORDANCE WITH THE REQUIREMENTS OF SPECIFICATION ASTM A490

LOAD



# CHARTER STEEL

## CHARTER STEEL TEST REPORT Reverse Has Text And Codes

A Division of  
Charter Manufacturing Company, Inc.

1658 Cold Springs Road  
Saukville, Wisconsin 53080

(262) 268-2400

1-800-437-8789

FAX (262) 268-2570

**UNYTITE, INC.**  
**ONE UNYTITE DRIVE**  
**PERU, IL 61354-**  
**Attn: ATTEN: JEAN MARGHERIO**

Cust. P.O.	33425
Cust Part#	C4140SCO.984A
Charter Sales Order	209967
Heat #	411390
Ship Lot #	481824
Grade#	4140 A SK FG RHQ
Process	DFSAR
Finish Size	0.984

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed below and on the reverse side, and that it satisfies those requirements.

### Test Results of Heat Lot# 411390

LAB CODE: 7388												
Chemistry	C	MN	P	S	SI	NI	CR	MO	CU	SN	V	
Wt%	0.41	0.88	0.013	0.011	0.220	0.05	0.83	0.16	0.09	0.006	0.001	
	AL	N	B	TI	NB							
	0.022	0.0060	0.0003	0.001	0.002							
CHEM. DEVIATION EXT.-GREEN = N/R												

### Test Results of Rolling Lot # 336048

QC DEVIATION EXT.-GREEN = N/R

### Test Results of Processing Lot # 481824

	# of Tests	Min Value	Max Value	Mean Value	
TENSILE (KSI)	2	90.3	90.6	90.5	TENSILE LAB = 0358-02
REDUCTION OF AREA (%)	2	63	65	64	RA LAB = 0358-02
ROCKWELL B (HRBW)	2	92	93	93	RB LAB = 0358-02
WIRE SIZE (Inches)	2	0.982	0.983	0.982	
WIRE OUT OF ROUND (Inches)	2	0.000	0.000	0.000	

NUM DECARB = 2      FREE FERRITE DECARB = 0.000      FREE FERR & PARTIAL DECARB = 0.002  
CP SPHERO % LAB = 0358-02      NUM SPHERO = 2      SPHERODIZATION (%) = 80.0  
QC DEVIATION EXT.-PROCESSED = N/R

Specifications: Meets customer specifications with any applicable Charter Steel exceptions for the following customer documents:  
Customer Document = UNYTITE RMS-003      Revision = 2      Dated =



The following statements are applicable to the material described on the front of this Test Report:

1. Except as noted, the steel supplied for this order was melted, rolled and processed in the United States.
2. Mercury was not used during the manufacture of this product; nor was the steel contaminated with mercury during processing.
3. Unless directed by the customer, there are no welds in any of the coils produced for this order.
4. The laboratory that generated the analytical or test results can be identified by the following key:

Certificate Number	Lab Code	Laboratory		Address
0358-01	7388	<b>CSMD</b>	Charter Steel Melting Division	1658 Cold Springs Road, Saukville, WI 53080
0358-02	8171	<b>CSR/ CSPD</b>	Charter Steel Rolling/ Processing Division	1658 Cold Springs Road, Saukville, WI 53080
0358-03	123633	<b>P4</b>	Charter Steel Ohio Processing Division	6255 US Highway 23, Risingsun, OH 43457
0358-04	125544	<b>CSC</b>	Charter Steel Cleveland	4300 E. 49 <sup>th</sup> St., Cuyahoga Heights, OH 44125-1004
*	*	--	Subcontracted test performed by laboratory not in Charter Steel system	

5. When run by a Charter Steel laboratory, the following tests were performed according to the latest revisions of the specifications listed below, as noted in the Charter Steel Laboratory Quality Manual:

Test	Possible Laboratory	Specification
Chemistry Analysis	CSMD	ASTM E415; ASTM E1019
Macroetch	CSMD	ASTM E381
Hardenability (Jominy)	CSMD	ASTM A255; JIS G0561
Grain Size	CSMD	ASTM E112
Tensile Test	CSR/ CSPD, P4, CSC	ASTM E8; ASTM A370
Rockwell Hardness	CSR/ CSPD, P4, CSC	ASTM E18; ASTM A370
Microstructure (spheroidization)	CSR/ CSPD, P4	ASTM A892
Cleanliness	CSR/ CSPD, CSC	ASTM E45

Charter Steel has been accredited to perform all of the above tests by the American Association for Laboratory Accreditation (A2LA). These accreditations expire 01/31/07.

All other test results associated with a Charter Steel laboratory that appear on the front of this report, if any, were performed according to documented procedures developed by Charter Steel and are not accredited by A2LA.

6. The test results on the front of this report are the true values measured on the samples taken from the production lot. They do not apply to any other sample.
7. This test report cannot be reproduced or distributed except in full without the written permission of Charter Steel. The primary customer whose name and address appear on the front of this form may reproduce this test report, subject to the following restrictions:
  - It may be distributed only to their customers
  - Both sides of all pages must be reproduced in full
8. This certification is given subject to the terms and conditions of sale provided in Charter Steel's acknowledgment (designated by our Purchase Order number) to the customer's purchase order. Both Purchase Order numbers appear on the front page of this Report.
9. Where the customer has provided a specification, the results on the front of this test report conform to that specification unless otherwise noted on this test report.



# TEST REPORT

**MITTAL**

REQ., JOB, CONTRACT NO.		PURCHASE ORDER NO. <b>33663</b>	
V E N D O R  <b>MITTAL STEEL USA</b> <b>INDIANA HARBOR BAR PRODUCTS</b> <b>3300 DICKEY ROAD</b> <b>EAST CHICAGO, INDIANA 46312</b>	SHIPPER'S NO.	BILL ORDER NO. <b>216562</b>	
	REPORT PRINT DATE	<b>03/16/2006</b>	

TEST REPORT TO:

**UNYTITE**

**1 UNYTITE DR**

**PERU IL**

SHIP TO:

**UNYTITE, INC**

**ONE UNYTITE DRIVE**

**PERU IL, 61354**

**CMS (REG TM) SQ HOT ROLLED ROUNDS SAE 1045 MOD /RMS-009 (03/09/01) 5 / FINE GRAIN/CWQ/RESTRICTED CHEMICAL REQ/RESTRICTED MAX INCIDENTAL ELEMENTS/MRR FOR SPEC SURF & CLEAN/SPECIAL STRAIGHTENED/EDDY CURRENT TESTED/**

**RND 1.2500 IN X 24 FT 10 1/2 IN**

HEAT: 690675    C : 0.45    Mn: 0.67    P : .008    S : .021    Si: 0.18  
                   Cu: .12    Ni: 0.05    Cr: 0.07    Mo: .02    Al: .030  
                   Cb: .001    V : .002    N : .009    Ti: .002

**Ni+Cr = 0.12**

MICROCLEANLINESS per    A (SULF)    B (ALUM)    C (SILI)    D (OXID)  
 ASTM E45 METHOD A    2.0T 0.0H    0.0T 0.0H    0.0T 0.0H    1.0T 0.0H

DECARBURIZATION:    A.A.D.    0.006\*

PART NUMBER: CSR1045M1250

**MATERIAL MEETS AUSTENITIC GRAIN SIZE REQUIREMENT OF 5 OR FINER  
 MATERIAL IS 100% SMELT/MELT AND MANUFACTURED IN THE U.S.A.**

**NOTARY**

<p>Unless otherwise stated, the steel described herein was manufactured, inspected and tested in accordance with the requirements of the contract or purchase order and conform to those requirements. The steel is free of surface mercury contamination at the time of shipment based on present methods and detection equipment. No mercury, radium or alpha source materials were used in the production of this steel. This steel has not been welded nor repair welded. Heat analyses and test results marked with an asterisk (*) were reported by a Mittal Steel USA, Indiana Harbor Bar Products approved third party. The "+" sign at the beginning of any line indicates an amendment to that line from a previously issued report for the same heat/order. All tests were performed by Mittal Steel USA, Indiana Harbor Bar Products. In accordance with the following, unless otherwise specified: Chemistry per ASTM E415 &amp; E1019; Hardenability per ASTM A255 and SAE J406; Macrostructure per ASTM E381 &amp; E1180; Mechanical Properties per ASTM A370, E8 &amp; E23; Hardness per ASTM E10 &amp; E18; and SAE J417; Cleanliness per SAE J421; Microstructure/Microcleanliness per ASTM E3, E45, E112 &amp; E1077, J419 &amp; J422, and JIS G0555; NDT per ASNT-TC-1A, Rounding per ASTM E29. Tested per most recent standard, unless otherwise noted. We hereby certify that the heat and/or test results in this report are applicable only to the items described herein, and are correct as contained in the records of the Company. This document shall not be reproduced except in full.</p>	<p>The management system governing the manufacture of this product is ISO/TS 16949:2002 certified, Certificate No. 38325; ISO 14001:1996 certified, Certificate No. 36274 and AZLA accredited in the fields of: Chemical, Mechanical and Environmental Testing - Certificate Nos. 111.01, 111.02 and 111.03</p> <p><i>Kevin R. Oberembt</i>                  Kevin R. Oberembt                  Manager - Quality Department</p>
--	--

11/02/2005 01:23 FAX 734 848 3303

HSP CERTS

+ CLEVELAND

003



640 Lavoy Road  
Erie, MI 48133  
Phone: 734/848-2915 Fax: 734/848-8734

B7527  
**CERTIFICATE  
OF  
ANALYSIS**

CUSTOMER ORDER NO: 13620	CERTIFICATION NO: 2 -203919	SHIPPER NO: 2 -203919	CERTIFIED DATE: 11/02/05
CUSTOMER PART NO: P2085H00	DH	SIZE: .1360 <sub>x</sub> 5.7340 <sub>x</sub> COIL	
CUSTOMER:  PRESTIGE STAMPING INC. **  P O BOX 1086  WARREN MI 480901086		GRADE: SAE J403 1035	
COATING SPECIFICATION: MELTED AND MANUFACTURED IN THE U.S.A.			

ATTENTION:

~~All units of measurement for chemistry are in weight percent.~~

COIL NO.	HEAT NUMBER	CHEMISTRY AND MECHANICAL PROPERTIES
EU5102	9400563	C = 0.350 MN= 0.750 P = 0.014 S = 0.003 SI= 0.040 AL= 0.049
COMMENT: ** MILL CERTIFICATION WITH LOAD **		

**RECEIVED**

NOV 03 2005

THE ABOVE MECHANICAL AND CHEMICAL ANALYSES WERE SUPPLIED BY THE PRODUCING MILL OR TESTED ON OUR OWN EQUIPMENT.  
Form No. FQC 001 Rev. 2

*Deborah Howard*  
Agent for Heidman Steel Products, Inc.

# HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17528

Invoice No. B7010227

Invoice Date 01/05/07

Sales Order K08981

Cert No Inv Line No Item No

Quantity Lot No

Assembly No Haydon PO

30217 170000 PTF100275

35 AZ991A

Heat 418910

A44772

# INSPECTION CERTIFICATE

SET LOT NO. AZ991A

**UNYTITE, INC.**

One Unytite Drive  
Peru, Illinois 61354

815-224-2221 — FAX # 815-224-3434



Specification	Size	Quantity
ASTM A490 F2280 Type 1 ASTM A563 Grade DH ASTM F436 Type 1	1 - 8 UNC X 2-3/4	13,705 pcs.

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

Date: Oct. 09, '06

BOLT LOT NO. AZ991

Mechanical Property of Full Size Bolts				Chemical Composition %													
Tensile Strength	Proof Load 72700 (Length Method)	Hardness	Heat Treatment	IDENTIFICATION													
				Quench		Temper		Min.		800		Heat No.					
90900	Max.																
104850	Part of Screw	±/- 0.0005 in.															
94450	Part of Screw	ALL PASS	1580														
Average 8 pcs		35.2	1013														

NUT LOT NO. AX071

Mechanical Property of Full Size Nuts				Chemical Composition %													
Hardness After 24 hr x 1000° F HRB	Proof Load (Lbf)	Heat Treatment	IDENTIFICATION	IDENTIFICATION													
				Quench		Temper		Min.		850		Heat No.					
24 - 38	Min.																
HRB 89	106050																
27.8	ALL PASS	1562	1211														
Mean/5 pcs																	

WASHER LOT NO. WB8266

Mechanical Property of Full Size Washers				Chemical Composition %													
Hardness (HRC)	Proof Load (Lbf)	Heat Treatment	IDENTIFICATION	IDENTIFICATION													
				Quench		Temper		Min.		850		Heat No.					
38 - 45	Min.																
42.5	106050																
Mean/5 Pcs	ALL PASS	1562	1211														

Material used for the bolt, nut and washer were melted & manufactured in the USA. The product was manufactured in the USA to ASTM specifications. The bolt and nut are manufactured by Unytite. We hereby certify that the material described has been manufactured and inspected satisfactory with requirement of the above specification.

Thread Accuracy		REMARKS
Bolt	ASME B1.1 Class 2A	
Nut	ASME B1.1 Class 2B	

Fastener Tension

Fastener Tension	
Spec. (lbf.)	67200
Mean / 5 sets.	82852
Standard Deviation	929

Chief of Quality Assurance Section

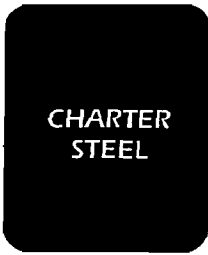
*[Signature]*

10-11-06

NOTARY PUBLIC - STATE OF ILLINOIS  
 MY COMMISSION EXPIRES: 10/18/08



LOAD



# CHARTER STEEL

## CHARTER STEEL TEST REPORT Reverse Has Text And Codes

A Division of  
Charter Manufacturing Company, Inc.

1658 Cold Springs Road  
Saukville, Wisconsin 53080

(262) 268-2400

1-800-437-8789

FAX (262) 268-2570

**UNYTITE, INC.**  
**ONE UNYTITE DRIVE**  
**PERU, IL 61354-**  
**Attn: ATTEN: JEAN MARGHERIO**

Cust. P.O.	33448
Cust Part#	C4140SCO.984A
Charter Sales Order	210714
Heat #	418980
Ship Lot #	485971
Grade#	4140 A SK FG RHQ
Process	DFSAR
Finish Size	0.984

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed below and on the reverse side, and that it satisfies those requirements.

### Test Results of Heat Lot# 418980

LAB CODE: 7388

Chemistry	C	MN	P	S	SI	NI	CR	MO	CU	SN	V
Wt%	0.41	0.85	0.010	0.009	0.230	0.05	0.99	0.21	0.08	0.007	0.001

AL	N	B	TI	NB
0.025	0.0070	0.0003	0.001	0.002

CHEM. DEVIATION EXT.-GREEN = N/R

### Test Results of Rolling Lot # 339034

QC DEVIATION EXT.-GREEN = N/R

### Test Results of Processing Lot # 485971

	# of Tests	Min Value	Max Value	Mean Value
TENSILE (KSI)	3	93.4	93.9	93.6
REDUCTION OF AREA (%)	3	60	61	61
ROCKWELL B (HRBW)	3	90	93	91
WIRE SIZE (Inches)	4	0.982	0.983	0.982
WIRE OUT OF ROUND (Inches)	4	0.000	0.000	0.000

TENSILE LAB = 0358-02  
RA LAB = 0358-02  
RB LAB = 0358-02

NUM DECARB = 2	FREE FERRITE DECARB = 0.000	FREE FERR & PARTIAL DECARB = 0.003
CP SPHERO % LAB = 0358-02	NUM SPHERO = 2	SPHERODIZATION (%) = 85.0
QC DEVIATION EXT.-PROCESSED = N/R		

Specifications: Meets customer specifications with any applicable Charter Steel exceptions for the following customer documents:  
Customer Document = UNYTITE RMS-003      Revision = 2      Dated =

Charter Steel  
Saukville, WI, USA

Fax number: ( ) -

Rem: Load1,Mail0,Fax0



*Tim Leahy*  
Tim Leahy  
Manager of Quality Assurance  
05/09/2006

The following statements are applicable to the material described on the front of this Test Report:

1. Except as noted, the steel supplied for this order was melted, rolled and processed in the United States.
2. Mercury was not used during the manufacture of this product; nor was the steel contaminated with mercury during processing.
3. Unless directed by the customer, there are no welds in any of the coils produced for this order.
4. The laboratory that generated the analytical or test results can be identified by the following key:

Certificate Number	Lab Code	Laboratory		Address
0358-01	7388	<b>CSMD</b>	Charter Steel Melting Division	1658 Cold Springs Road, Saukville, WI 53080
0358-02	8171	<b>CSR/ CSPD</b>	Charter Steel Rolling/ Processing Division	1658 Cold Springs Road, Saukville, WI 53080
0358-03	123633	<b>P4</b>	Charter Steel Ohio Processing Division	6255 US Highway 23, Risingsun, OH 43457
0358-04	125544	<b>CSC</b>	Charter Steel Cleveland	4300 E. 49 <sup>th</sup> St., Cuyahoga Heights, OH 44125-1004
*	*	--	Subcontracted test performed by laboratory not in Charter Steel system	

5. When run by a Charter Steel laboratory, the following tests were performed according to the latest revisions of the specifications listed below, as noted in the Charter Steel Laboratory Quality Manual:

Test	Possible Laboratory	Specification
Chemistry Analysis	CSMD	ASTM E415; ASTM E1019
Macroetch	CSMD	ASTM E381
Hardenability (Jominy)	CSMD	ASTM A255; JIS G0561
Grain Size	CSMD	ASTM E112
Tensile Test	CSR/ CSPD, P4, CSC	ASTM E8; ASTM A370
Rockwell Hardness	CSR/ CSPD, P4, CSC	ASTM E18; ASTM A370
Microstructure (spheroidization)	CSR/ CSPD, P4	ASTM A892
Cleanliness	CSR/ CSPD, CSC	ASTM E45

Charter Steel has been accredited to perform all of the above tests by the American Association for Laboratory Accreditation (A2LA). These accreditations expire 01/31/07.

All other test results associated with a Charter Steel laboratory that appear on the front of this report, if any, were performed according to documented procedures developed by Charter Steel and are not accredited by A2LA.

6. The test results on the front of this report are the true values measured on the samples taken from the production lot. They do not apply to any other sample.
7. This test report cannot be reproduced or distributed except in full without the written permission of Charter Steel. The primary customer whose name and address appear on the front of this form may reproduce this test report, subject to the following restrictions:
  - It may be distributed only to their customers
  - Both sides of all pages must be reproduced in full
8. This certification is given subject to the terms and conditions of sale provided in Charter Steel's acknowledgment (designated by our Purchase Order number) to the customer's purchase order. Both Purchase Order numbers appear on the front page of this Report.
9. Where the customer has provided a specification, the results on the front of this test report conform to that specification unless otherwise noted on this test report.



Heat #:	S74339
Size:	1-1/4"
Product:	Round Bar
Grade:	C1045M23FC
Date Rolled:	01-30-2006
P.O	33664
M.O #:	600633203
lgth 24'10"	

# CERTIFIED TEST REPORT

## CHEMICAL ANALYSIS (WT %)

C	Mn	P	S	Si	Sn	Cu	Ni	Cr	Mo	Cb	V	Co	Al	Ti	Ca ppm	N ppm
0.45	.69	0.008	0.030	0.22	0.022	0.29	0.11	0.14	0.03	0.001	0.027	0.009	0.003	0.0025	18	88

MATERIAL 100% MELTED AND ROLLED IN THE USA. MANUFACTURING PROCESSES FOR THIS STEEL, WHICH MAY INCLUDE SCRAP MELTED IN AN ELECTRIC ARC FURNACE AND HOT ROLLING, HAVE BEEN PERFORMED AT GERDAU AMERISTEEL MINNESOTA, 1678 RED ROCK ROAD, SAINT PAUL MINNESOTA, USA. ALL PRODUCT PRODUCED FROM STRAND CAST BILLETS. NO WELD REPAIRMENT PERFORMED. STEEL NOT EXPOSED TO MERCURY OR ANY LIQUID ALLOY WHICH IS LIQUID AT AMBIENT TEMPERATURES DURING PROCESSING OR WHILE IN GERDAU AMERISTEEL MINNESOTA POSSESSION.

## 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

## MECHANICAL TEST REPORT

SPECIMEN AREA (in <sup>2</sup> )	YIELD (Kips)	YIELD (Ksi)	TENSILE (Kips)	TENSILE (Ksi)	GAUGE LENGTH (in)	% ELONG	BEND	% R.A.

### Additional Specifications/Comments:

A576-90b (2000)  
A29/A29M-05

Quality Program Manual Rev. I dtd 6/10/05

Grain Size: <input type="text" value="Fine"/>	Reduction Ratio: <input type="text" value="24.6:1"/>	C.E Per: <input type="text"/>	As Rolled surface Hardness							
Coding: <input type="text"/>	D.I: <input type="text" value="1.46"/> in.	Ms: <input type="text" value="608.1"/> Deg F.	C.E: <input type="text"/>	<table border="1"> <tr><th>HBW</th><th>HRC</th></tr> <tr><td>Test 1:</td><td></td></tr> <tr><td>Test 2:</td><td></td></tr> </table>	HBW	HRC	Test 1:		Test 2:	
HBW	HRC									
Test 1:										
Test 2:										

### CHARPY IMPACT TEST

* Test 1	Test 2
Temp (F)	
ft-Ib 1	
ft-Ib 2	
ft-Ib 3	

ASTM E45 is not a laboratory accredited test.

Micro Clean Average

At:  Ah:  Bt:  Bh:  Ct:  Ch:  Dt:  Dh:  S-Rating:  O-Rating:

Macro Etch:

The above results relate only to the items tested.

Chemical tests performed in accordance with ASTM E415 and E1019. Mechanical tests performed in accordance to ASTM E8, E10, E18, E290 and A370. All other tests performed in accordance with the requirements of applicable specifications unless otherwise noted above. We hereby certify that the above test results are representative of those contained in the records of the company.

Any modification to this certificate as provided by Gerdau Ameristeel - Minnesota without the expressed written consent of Gerdau Ameristeel - Minnesota negates the validity of this test report. This report shall not be reproduced except in full, without the expressed written consent of Gerdau Ameristeel Minnesota. Gerdau Ameristeel - Minnesota is not responsible for the inability of this material to meet specific applications.

### ASTM Test Method

Accredited to:	ASTM A370	ASTM E8	ASTM E10	ASTM E18	ASTM E23	ASTM E112	ASTM E255	ASTM E290	ASTM E415	ASTM E1019
ISO 17025	X	X	X	X				X	X	X
subcontractor (ISO 170 25)		*			*	*	*			

X Gerdau Ameristeel Minnesota, A2LA Certification #1055-01 Exp. 6/30/06

\* Denotes Testing By Sub-Contractor:  
Metallurgical Services Inc., A2LA Certification #510-01 Exp. 12/31/06  
Stork Twin City Testing, A2LA Certification #1479-01 Exp 12/31/06

Measurement of uncertainty information is available upon request.

SWORN AND SUBSCRIBED TO BEFORE ME

THIS 31 DAY July 2006  
*Debra Kariesch*  
THIS CERTIFICATE IS NOTARIALIZED ONLY WHEN REQUESTED.  
**DEBRA KARIESCH**  
Notary Public-Minnesota  
My Commission Expires Jan 31, 2010

SIGNED:

QA Approval

DATE: 07-31-2006

*K. Wong*

APPROVAL:

Ken Wong

B8266



640 Lavoy Road  
Erie, MI 48133  
Phone: 734/848-2915 Fax: 734/848-8734

# CERTIFICATE OF ANALYSIS

CUSTOMER ORDER NO: 14050	CERTIFICATION NO: 2 -210784	SHIPPER NO: 2 -210784	CERTIFIED DATE: 05/10/06
CUSTOMER PART NO: P2085H00	RF	SIZE: .1360 x 5.7340 x	COIL
CUSTOMER:  PRESTIGE STAMPING INC. **  P O BOX 1086  WARREN MI 480901086		GRADE: SAR J403 1035	
REPRODUCED AND MANUFACTURED IN THE U.S.A.			

ATTENTION:

~~All units of measurement for chemistry are in weight percent.~~

COIL NO.	HEAT NUMBER	CHEMISTRY AND MECHANICAL PROPERTIES
HG4401	9402318	C = 0.340 MN= 0.750 P = 0.010 S = 0.004 SI= 0.070 AL= 0.054

RECEIVED

MAY 15 2006

*[Signature]*

*[Signature]*

THE ABOVE MECHANICAL AND CHEMICAL ANALYSES WERE SUPPLIED BY THE PRODUCING MILL OR TESTED ON OUR OWN EQUIPMENT.  
Form No. FQC 001 Rev. 2

Agent for Heidman Steel Products, Inc.

# HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17528

Invoice No. B7010227

Invoice Date 01/05/07

Sales Order K08981

Cert No Inv Line No Item No

Quantity Lot No

Heat

Assembly No

Haydon PO

30819 190000 PTU087200

10 BC571A

428740

A47284

BC571A

# INSPECTION CERTIFICATE

SET LOT NO.

**UNYTITE, INC.**

One Unytite Drive  
Peru, Illinois 61354

815-224-2221 — FAX # 815-224-3434



Specification	Size	Quantity
ASTM F1852 Type 1	7/8 - 9 UNC X 2	23,425 pcs.
ASTM A563 Grade DH		
ASTM F436 Type 1		

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

**BOLT LOT NO.** BC571

Date: Nov. 13, '06

Mechanical Property of Full Size Bolts				Chemical Composition %										
Tensile Strength	Proof Load (Length Method)	Hardness	Heat Treatment	IDENTIFICATION	C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100	Mo x 100	B x 10,000
Min. 55450	Max. +/- 0.0005 in.	34 MAX	1580		30	15	60	Max. 40	Max. 50	-	-	-	-	-
Average 70125	ALL PASS	32.8	869		32	25	81	7	6	9	6	6	1	29

**NUT LOT NO.** BC182

Mechanical Property of Full Size Nuts				Chemical Composition %										
Hardness (HRC)	Hardness After 24 hr x 1000° F HRB	Proof Load (Lbf)	Heat Treatment	IDENTIFICATION	C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100	Thread Accuracy (Bolt & Nut)	
														Quench
Min. 24 - 38	HRB 89	80850	1184		20	-	60	Max. 40	Max. 50	-	-	-	ASME B1.1 Class 2A	
Mean/5pcs. 29.5	—	ALL PASS	1562		44	25	81	16	33	16	5	12	ANSI B1.1 Class 2B	

**WASHER LOT NO.** WB6901

Mechanical Property of Full Size Washers				Chemical Composition %										
Hardness (HRC)	Hardness (HRB)	Proof Load (Lbf)	Heat Treatment	IDENTIFICATION	C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100	Fastener Tension	
														Quench
Min. 38 - 45	HRB 89	80850	1184		-	-	-	Max. 40	Max. 50	-	-	-	41000	
Mean/5 Pcs. 40.6	—	ALL PASS	1562		36	9	62	10	5	10	-	-	49718	

Material used for the bolt, nut and washer were melted & manufactured in the USA. The product was manufactured in the USA to ASTM specifications. The bolt and nut are manufactured by Unytite. We hereby certify that the material described has been manufactured and inspected satisfactory with requirement of the above specification.

**REMARKS:**

JEAN MARGHERIO  
OFFICIAL SEAL  
NOTARY PUBLIC - STATE OF ILLINOIS  
MY COMMISSION EXPIRES: 10/18/09  
11-14-06

**Fastener Tension**

Spec. (lbf.)	41000
Mean / 6 sets.	49718
Standard Deviation	2980

Chief of Quality Assurance Section

LOAD



**CHARTER STEEL**

**CHARTER STEEL TEST REPORT**  
Reverse Has Text And Codes

A Division of  
Charter Manufacturing Company, Inc.

1658 Cold Springs Road  
Saukville, Wisconsin 53080  
(262) 268-2400  
1-800-437-8789  
FAX (262) 268-2570

UNYTITE, INC.  
ONE UNYTITE DRIVE  
PERU, IL 61354-  
Attn: ATTEN: JEAN MARGHERIO

Cust. P.O.	29647
Cust Part#	C10B30SCO.856D
Charter Sales Order	177724
Heat #	428740
Ship Lot #	497113
Grade#	10B30 M SK FG RHQ
Process	DD
Finish Size	0.856

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed below and on the reverse side, and that it satisfies those requirements.

Test Results of Heat Lot# 428740

Lab Code: 7388												
Chemistry	C	MN	P	S	SI	NI	CR	MO	CU	SN	V	
Wt%	0.32	0.81	0.007	0.006	0.250	0.06	0.06	0.01	0.09	0.005	0.001	
	AL	N	B	TI	NB							
	0.024	0.0060	0.0029	0.021	0.001							
Jominy (HRC)	JOM01	JOM02	JOM03	JOM04	JOM05	JOM06	JOM07	JOM08	JOM09	JOM10	JOM11	JOM12
	53	52	52	48	31	24	23	22	22	22	21	20
	JOM13	JOM14	JOM15	JOM16	JOM18	JOM20	JOM22	JOM24	JOM26	JOM28	JOM30	JOM32
	0	0	0	0	0	0	0	0	0	0	0	0

JOMINY SAMPLE TYPE ENGLISH = R JOMINY LAB = 0358-01  
CHEM. DEVIATION EXT.-GREEN = N/R  
E45 INCLUSION LAB = 0358-02

Cleanliness	ASTM-E45 Method A				
	A	B	C	D	
	Thin	1.0	1.5	0.0	0.5
	Heavy	0.0	0.0	0.0	0.0

Test Results of Rolling Lot # 343228

QC DEVIATION EXT.-GREEN = N/R

Test Results of Processing Lot # 497113

	# of Tests	Min Value	Max Value	Mean Value	
TENSILE (KSI)	3	98.3	98.8	98.6	TENSILE LAB = 0358-02
REDUCTION OF AREA (%)	3	52	53	52	RA LAB = 0358-02
ROCKWELL B (HRBW)	3	91	93	92	RB LAB = 0358-02
WIRE SIZE (Inches)	6	0.854	0.855	0.855	
WIRE OUT OF ROUND (Inches)	6	0.000	0.000	0.000	
QC DEVIATION EXT.-PROCESSED = N/R					

Specifications: Meets customer specifications with any applicable Charter Steel exceptions for the following customer documents:  
Customer Document = UNYTITE Revision = 5 Dated = 8-MAY-2003

Additional Comments:

Charter Steel  
Saukville, WI, USA



*Tim Leahy*  
Tim Leahy  
Manager of Quality Assurance  
09/18/2006

The following statements are applicable to the material described on the front of this Test Report:

1. Except as noted, the steel supplied for this order was melted, rolled and processed in the United States.
2. Mercury was not used during the manufacture of this product; nor was the steel contaminated with mercury during processing.
3. Unless directed by the customer, there are no welds in any of the coils produced for this order.
4. The laboratory that generated the analytical or test results can be identified by the following key:

Certificate Number	Lab Code	Laboratory		Address
0358-01	7388	<b>CSMD</b>	Charter Steel Melting Division	1658 Cold Springs Road, Saukville, WI 53080
0358-02	8171	<b>CSR/ CSPD</b>	Charter Steel Rolling/ Processing Division	1658 Cold Springs Road, Saukville, WI 53080
0358-03	123633	<b>P4</b>	Charter Steel Ohio Processing Division	6255 US Highway 23, Risingsun, OH 43457
0358-04	125544	<b>CSC</b>	Charter Steel Cleveland	4300 E. 49 <sup>th</sup> St., Cuyahoga Heights, OH 44125-1004
*	*	—	Subcontracted test performed by laboratory not in Charter Steel system	

5. When run by a Charter Steel laboratory, the following tests were performed according to the latest revisions of the specifications listed below, as noted in the Charter Steel Laboratory Quality Manual:

Test	Possible Laboratory	Specification
Chemistry Analysis	CSMD	ASTM E415; ASTM E1019
Macroetch	CSMD	ASTM E381
Hardenability (Jominy)	CSMD	ASTM A255; JIS G0561
Grain Size	CSMD	ASTM E112
Tensile Test	CSR/ CSPD, P4, CSC	ASTM E8; ASTM A370
Rockwell Hardness	CSR/ CSPD, P4, CSC	ASTM E18; ASTM A370
Microstructure (spheroidization)	CSR/ CSPD, P4	ASTM A892
Cleanliness	CSR/ CSPD, CSC	ASTM E45

Charter Steel has been accredited to perform all of the above tests by the American Association for Laboratory Accreditation (A2LA). These accreditations expire 01/31/07.

All other test results associated with a Charter Steel laboratory that appear on the front of this report, if any, were performed according to documented procedures developed by Charter Steel and are not accredited by A2LA.

6. The test results on the front of this report are the true values measured on the samples taken from the production lot. They do not apply to any other sample.
7. This test report cannot be reproduced or distributed except in full without the written permission of Charter Steel. The primary customer whose name and address appear on the front of this form may reproduce this test report, subject to the following restrictions:
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  - Both sides of all pages must be reproduced in full
8. This certification is given subject to the terms and conditions of sale provided in Charter Steel's acknowledgment (designated by our Purchase Order number) to the customer's purchase order. Both Purchase Order numbers appear on the front page of this Report.
9. Where the customer has provided a specification, the results on the front of this test report conform to that specification unless otherwise noted on this test report.





**CERTIFIED MATERIAL TEST REPORT**

<b>CUSTOMER ORDER NUMBER</b> P001013	<b>CUSTOMER PART NUMBER</b> E1045SC11250	<b>HEAT NUMBER</b> M21468	<b>WORK ORDER NUMBER</b> 201181 102	<b>DATE</b> 9/18/06
---	---	------------------------------	--	------------------------

**REPORT TO**  
TRACO  
UNYTITE, INC.

ONE UNYTITE DRIVE  
PERU , IL 61354-9710

**SHIP TO**

UNYTITE, INC.  
ONE UNYTITE DRIVE  
PERU , IL 61354

**ORDERED**

<b>GRADE</b> 1045	<b>SIZE</b> 1 1/8" RND	<b>LENGTH</b> 24' 10 1/2"
----------------------	---------------------------	------------------------------

**CUSTOMER SPECIFICATIONS**  
SAE 1045; ASTM E381-91

**CHEMICAL ANALYSIS - (BAR AVERAGE)**

C	Mn	P	S	Si	Ni	Cr	Mo	Cu	Sn	Al
0.44	0.81	0.016	0.033	0.25	0.05	0.12	0.02	0.16	0.007	0.004
V	Nb									
0.056	0.002									

**GRAIN SIZE** SPECIFICATION ASTM E112 FINE GRAIN 5-8

**MACROCLEANLINESS** SPECIFICATION ASTM E381

PLATE I

PLATE II

<b>AVERAGE</b>	<b>S</b>	<b>R</b>	<b>C</b>	<b>NONE</b>
	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  
3000 East Front Street  
Monroe, MI 48161

MACSTEEL-JACKSON   
MACSTEEL-FT SMITH   
MACSTEEL-MONROE

  
Quality Assurance Representative

**CERTIFIED MATERIAL TEST REPORT**

CUSTOMER ORDER NUMBER	CUSTOMER PART NUMBER	HEAT NUMBER	WORK ORDER NUMBER	DATE
P001013	B1045SC11250	M21468	201181 102	9/18/06

REPORT TO  
TRACO  
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 1/8" RND	24' 10 1/2"

**CUSTOMER SPECIFICATIONS**

SAE 1045; ASTM E381-91

**REDUCTION RATIO**

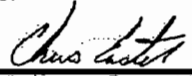
RATIO= 36.2 TO 1.0

\*\* 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. \*\*

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

MACSTEEL  
3000 East Front Street  
Monroe, MI 48161

MACSTEEL-JACKSON   
MACSTEEL-FT SMITH   
MACSTEEL-MONROE

  
Quality Assurance Representative

06-06-2005 15:45 GLOMAR STEEL CO. → 15867732298 NO:727 D001  
 LSG BURNS HARBOR, INC.  
 481325(S-05) TIME:1330 BURNS HARBOR, IN 46304 0806-17028  
 REG. JOB, CONTRACT NO. PURCH. ORDER DATE PURCHASE ORDER NO. RELEASE

4/06/05 519641

DISPATCHING/REGIMEO BILL ORDER NO.  
 EH017-25967

SOLD TO GLOMAR STEEL CO  
 64 MILL ST  
 ECORSE MI 48229  
 GLOMAR STEEL CO  
 64 MILL ST  
 ECORSE MI 48229  
 SHIP TO

FROM BURNS HARBOR, IN ROUTE LFDE LAFOND EXPRESS  
 DATE SHPD 05/05/05 FRT COLLECT

VEHICLE IDENTIFICATION NO. PCS/PKGS KIND OF PACKAGE, DESCRIPTION OF ARTICLES, SPECIAL MARKS AND EXCEPTIONS WEIGHT (POUNDS)  
 TRLR 901 1 COIL STEEL SHEETS 44990  
 DUNNAGE 10  
 FLAT-TARP COV

*B6901*

ITEM NO. DESCRIPTION P/C QUANTITY SHIPPED

CP HT# PCS LFT/COIL# PKGS  
 SPEC: (15002000005006000) (0000000)  
 COLD ROLLED FINISHED SPECIAL OIL COILS  
 COIL P  
 (2028-YYY-428)  
 -0000-  
 .136 (MIN) X 43 X COIL P  
 01 843L61830 1 591268 1 9355' 44990  
 (THEO LB 44171)  
 HT# C MN P S SI CU NI  
 0622888 0.36 0.62 0.010 0.005 0.091 0.020 0.010  
 CR MO V TI AL CB N  
 0.074  
 B

*ATTN: JULIE  
 4 PAGES*

melted and mfg in USA

1	1	358980-00	1	017	7	2182	140		X1					
S/N	E/L	INV	S/N	D/L	S/N	B/L	CUST	TERMS	DIST	P/D	ZONE	MKT	FDB	TK

\*SHIPPER'S BILL ORDER COMPLETE

SHIPPING NOTICE

CAUTION--TO BE COVERED THROUGH SUPPLIER FOR ANY LOSS OR DAMAGE IN TRANSIT. CONSIGNEE MUST TAKE PROPER EXCEPTIONS AT TIME OF DELIVERY.

HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17528

Invoice No. B7010227

Invoice Date 01/05/07

Sales Order K08981

Cert No Inv Line No Item No

Quantity Lot No

Assembly No Haydon PO

30827 210000 PTU075275

90 BB361A

Heat 442360

A47284

BB361A

# INSPECTION CERTIFICATE

SET LOT NO.

Specification	Size	Quantity
ASTM F1852 Type 1	3/4-10 UNC X 2-3/4	33,775 pcs.
ASTM A563 Grade DH		
ASTM F436 Type 1		

**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  
 BB361

Date: Oct. 11, '06

BOLT LOT NO.

Spec.	Mechanical Property of Full Size Bolts				IDENTIFICATION 	Chemical Composition %											
	Tensile Strength		Hardness			Heat Treatment		C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100	Mo x 100	B x 10,000
	Load (lbf)	Position of fracture	Proof Load (lbf)	HRC		Quench	Temper										
40100	Min.	Part of Screw	Max.	34 MAX	Min.	800	30	15	60	40	50	-	-	-	-	-	
50175	Part of Screw	ALL PASS	31.8	1580	869	442360	31	28	74	8	8	7	4	6	1	29	

AZ911

NUT LOT NO.

Hardness (HRC)	Hardness After 24 hr x 1000° F HRB	Proof Load (lbf)	Heat Treatment		IDENTIFICATION 	Chemical Composition %									
			Quench	Temper		C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100		
			Min.	800											
24-38	HRB 89	58450	-	800	20	-	60	40	11	18	22	10	-	-	-
29.1	—	ALL PASS	1562	1184	44	22	68	1.1	1.8	2.2	1.0	1.3	-	-	-

WB8637

WASHER LOT NO.

Hardness (HRC)	IDENTIFICATION 	Chemical Composition %										
		C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100	Fastener Tension Spec. (lbf.)	Fastener Tension Mean / 6 sets.	
												Heat NO.
38-45	Heat NO.	-	-	-	-	-	-	-	-	-	-	-
42.0	B15520	39	19	74	7	2	-	-	1807	1807	-	-

Material used for the bolt, nut and washer were melted & manufactured in the USA. The product was manufactured in the USA to ASTM specifications. The bolt and nut are manufactured by Unyrite. We hereby certify that the material described has been manufactured and inspected satisfactory with requirement of the above specification.

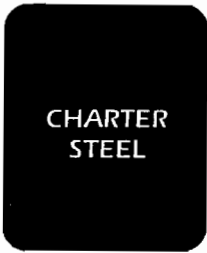
Chief of Quality Assurance Section

*[Signature]*

Thread Accuracy (Bolt & Nut)
Bolt ASME B1.1 Class 2A
Nut ANSI B1.1 Class 2B

REMARKS
OFFICIAL SEAL JEAN MARGHERIO NOTARY PUBLIC - STATE OF ILLINOIS MY COMMISSION EXPIRES 10/18/09 10-14-06

LOAD



# CHARTER STEEL

## CHARTER STEEL TEST REPORT Reverse Has Text And Codes

A Division of  
Charter Manufacturing Company, Inc.

1658 Cold Springs Road  
Saukville, Wisconsin 53080  
(262) 268-2400  
1-800-437-8789  
FAX (262) 268-2570

**UNYTITE, INC.**  
**ONE UNYTITE DRIVE**  
**PERU, IL 61354-**  
**Attn: ATTEN: JEAN MARGHERIO**

Cust. P.O.	29646
Cust Part#	C10B30SCO.732D
Charter Sales Order	177723
Heat #	442360
Ship Lot #	498830
Grade#	10B30 M SK FG RHQ
Process	DD
Finish Size	0.732

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed below and on the reverse side, and that it satisfies those requirements.

**Test Results of Heat Lot# 442360**

Lab Code: 7388

Chemistry	C	MN	P	S	SI	NI	CR	MO	CU	SN	V
Wt%	0.31	0.74	0.008	0.008	0.260	0.04	0.06	0.01	0.07	0.005	0.001
	AL	N	B	TI	NB						
	0.022	0.0060	0.0029	0.018	0.001						

Jominy (HRC)	JOM01	JOM02	JOM03	JOM04	JOM05	JOM06	JOM07	JOM08	JOM09	JOM10	JOM11	JOM12
	53	52	51	45	27	23	22	22	21	20	20	0
JOM13	JOM14	JOM15	JOM16	JOM18	JOM20	JOM22	JOM24	JOM26	JOM28	JOM30	JOM32	
0	0	0	0	0	0	0	0	0	0	0	0	0

JOMINY SAMPLE TYPE ENGLISH = R JOMINY LAB = 0358-01  
CHEM. DEVIATION EXT.-GREEN = N/R  
E45 INCLUSION LAB = 0358-02

Cleanliness	ASTM-E45 Method A			
	A	B	C	D
Thin	0.5	1.0	0.0	0.5
Heavy	0.0	0.0	0.0	0.0

**Test Results of Rolling Lot # 349624**

QC DEVIATION EXT.-GREEN = N/R

**Test Results of Processing Lot # 498830**

	# of Tests	Min Value	Max Value	Mean Value	
TENSILE (KSI)	3	95.3	98.2	96.4	TENSILE LAB = 0358-02
REDUCTION OF AREA (%)	3	50	54	52	RA LAB = 0358-02
ROCKWELL B (HRBW)	3	92	93	92	RB LAB = 0358-02
WIRE SIZE (Inches)	16	0.730	0.730	0.730	
WIRE OUT OF ROUND (Inches)	16	0.000	0.000	0.000	

QC DEVIATION EXT.-PROCESSED = N/R

Specifications: Meets customer specifications with any applicable Charter Steel exceptions for the following customer documents:  
Customer Document = UNYTITE Revision = 5 Dated = 8-MAY-2003

Additional Comments:

Charter Steel  
Saukville, WI, USA



Fax number: ( ) - Rem: Load1,Mail0,Fax0

*Tim Leahy*  
Tim Leahy  
Manager of Quality Assurance  
10/04/2006

The following statements are applicable to the material described on the front of this Test Report:

1. Except as noted, the steel supplied for this order was melted, rolled and processed in the United States.
2. Mercury was not used during the manufacture of this product; nor was the steel contaminated with mercury during processing.
3. Unless directed by the customer, there are no welds in any of the coils produced for this order.
4. The laboratory that generated the analytical or test results can be identified by the following key:

Certificate Number	Lab Code	Laboratory		Address
0358-01	7388	<b>CSMD</b>	Charter Steel Melting Division	1658 Cold Springs Road, Saukville, WI 53080
0358-02	8171	<b>CSR/ CSPD</b>	Charter Steel Rolling/ Processing Division	1658 Cold Springs Road, Saukville, WI 53080
0358-03	123633	<b>P4</b>	Charter Steel Ohio Processing Division	6255 US Highway 23, Risingsun, OH 43457
0358-04	125544	<b>CSC</b>	Charter Steel Cleveland	4300 E. 49 <sup>th</sup> St., Cuyahoga Heights, OH 44125-1004
*	*	—	Subcontracted test performed by laboratory not in Charter Steel system	

5. When run by a Charter Steel laboratory, the following tests were performed according to the latest revisions of the specifications listed below, as noted in the Charter Steel Laboratory Quality Manual:

Test	Possible Laboratory	Specification
Chemistry Analysis	CSMD	ASTM E415; ASTM E1019
Macroetch	CSMD	ASTM E381
Hardenability (Jominy)	CSMD	ASTM A255; JIS G0561
Grain Size	CSMD	ASTM E112
Tensile Test	CSR/ CSPD, P4, CSC	ASTM E8; ASTM A370
Rockwell Hardness	CSR/ CSPD, P4, CSC	ASTM E18; ASTM A370
Microstructure (spheroidization)	CSR/ CSPD, P4	ASTM A892
Cleanliness	CSR/ CSPD, CSC	ASTM E45

Charter Steel has been accredited to perform all of the above tests by the American Association for Laboratory Accreditation (A2LA). These accreditations expire 01/31/07.

All other test results associated with a Charter Steel laboratory that appear on the front of this report, if any, were performed according to documented procedures developed by Charter Steel and are not accredited by A2LA.

6. The test results on the front of this report are the true values measured on the samples taken from the production lot. They do not apply to any other sample.
7. This test report cannot be reproduced or distributed except in full without the written permission of Charter Steel. The primary customer whose name and address appear on the front of this form may reproduce this test report, subject to the following restrictions:
  - It may be distributed only to their customers
  - Both sides of all pages must be reproduced in full
8. This certification is given subject to the terms and conditions of sale provided in Charter Steel's acknowledgment (designated by our Purchase Order number) to the customer's purchase order. Both Purchase Order numbers appear on the front page of this Report.
9. Where the customer has provided a specification, the results on the front of this test report conform to that specification unless otherwise noted on this test report.





ST PAUL STEEL MILL  
1678 RED ROCK ROAD  
ST PAUL MN 55119 USA  
(651) 731-5600

Chemical and Physical Test Report  
MADE IN UNITED STATES

M-032019

PRODUCED IN: ST PAUL

SHIP TO UNYTITE INC 1 UNYTITE DRIVE PERU, IL 61354	INVOICE TO UNYTITE INC 1 UNYTITE DRIVE PERU, IL 61354	SHIP DATE 09/27/06	CUST. ACCOUNT NO 70000042
---	--	-----------------------	------------------------------

SHAPE * SIZE	GRADE	SPECIFICATION	SALES ORDER	CUST P.O. NUMBER
R15BQ	C1045M23F	A576-908(2000) A29/A29M-05	6071740-01	P001009
HEAT I.D.	C	Mn P S Si Cu Ni Cr Mo V Nb N Sn Al Ti Ca Co		
S77128	.44	.68 .011 .018 .22 .22 .10 .13 .030 .028 .002 .0092 .014 .002 .00270 .00280 .009		

Mechanical Test: Red R 38.5 Std Dev=0 Idl Diam: 1.376  
Cleanliness Test

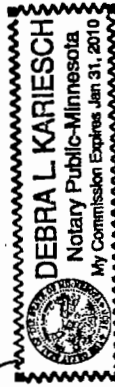
ROLL LOT M627509, QUALITY PROGRAM MANUAL REV. 1, DTD 6/10/05  
FINE(5-8)

Grain Test:  
Jominy:

J1	J2	J3	J4	J5	J6	J7	J8	J9	J10	J12	J14	J16	J18	J20	J24	J28	J32
58	54	47	35	28.9	25	24	23	22	21	20	19	18	17	16	15	14	14

Customer Requirements SOURCE: MINNESOTA BILLETS CASTING: STRAND CAST  
CUST ITEM NUMBER: B1045SC1.0000

*Debra Kariesch*



This material, including the billets, was produced and manufactured in the United States of America

*Bhaskar*  
Bhaskar Yalamanchilli  
Quality Director  
Gerdau Ameristeel

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

Mgr. Metallurg. Svcs.  
ST PAUL STEEL MILL

Seller warrants that all material furnished shall comply with specifications subject to standard published manufacturing variations. NO OTHER WARRANTIES, EXPRESSED OR IMPLIED, ARE MADE BY THE SELLER, AND SPECIFICALLY EXCLUDED ARE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. In no event shall seller be liable for indirect, consequential or punitive damages arising out of or related to the materials furnished by seller. Any claim for damages for materials that do not conform to specifications must be made from buyer to seller immediately after delivery of same in order to allow the seller the opportunity to inspect the material in question.





**GERDAU AMERISTEEL™**

**Lead and Mercury Content of Steel**

Lead and mercury are not purposefully introduced in the Gerdau Ameristeel steel manufacturing process, and are not present at levels that would require disclosure on Material Safety Data Sheets. To the best of our knowledge, no mercury is present in our steel products.

Sincerely,

Gerdau Ameristeel

A. James Turner  
Director, Environment & Quality



**GERDAU AMERISTEEL™**

**Weld Repair of Finished Product**

We hereby certify that weld repair of finished products is not performed at Gerda Ameristeel.

Sincerely,

Gerda Ameristeel

A. James Turner  
Director, Environment & Quality



640 Lavoy Road  
Erie, MI 48133  
Phone: 734/848-2915 Fax: 734/848-8734

B8639

# CERTIFICATE OF ANALYSIS

CUSTOMER ORDER NO: 14356	CERTIFICATION NO: 1-333498	SHIPPER NO: 1-333498	CERTIFIED DATE: 09/12/06
CUSTOMER PART NO: P1480H00	RF	SIZE: .1220 x 5.5000 x	COIL

CUSTOMER:  
**PRESTIGE STAMPING INC. \*\***  
 P O BOX 1086  
 WARREN MI 480901086

GRADE:  
SAE J403 1040

**MADE IN AND MANUFACTURED IN THE U.S.A.**

ATTENTION:  
~~All units of measurement for chemistry are in weight percent.~~

COIL NO.	HEAT NUMBER	CHEMISTRY AND MECHANICAL PROPERTIES
JN6202	B15520	C = 0.390 MN= 0.740 P = 0.007 S = 0.002 SI= 0.190 AL= 0.032
JN6205	B15520	C = 0.390 MN= 0.740 P = 0.007 S = 0.002 SI= 0.190 AL= 0.032
JN6203	B15520	C = 0.390 MN= 0.740 P = 0.007 S = 0.002 SI= 0.190 AL= 0.032

## RECEIVED

SEP 14 2006

Time    

Agent for Heidman Steel Products, Inc.

THE ABOVE MECHANICAL AND CHEMICAL ANALYSES WERE SUPPLIED BY THE PRODUCING MILL OR TESTED ON OUR OWN EQUIPMENT.  
 Form No. FQC 001 Rev. 2

# HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17528

Invoice No. B7010227

Invoice Date 01/05/07

Sales Order K08981

Cert No Inv Line No Item No

Quantity Lot No

Heat

Assembly No

Haydon PO

30987 220000 PTU075250

190 JH841A

450150

A47284

JH841A

# INSPECTION CERTIFICATE

SET LOT NO.

Specification	Size	Quantity
ASTM F1852 Type 1 ASTM A563 Grade DH ASTM F436 Type 1	3/4-10 UNC X 2-1/2	33,775 pcs.



**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

**BOLT LOT NO.** JH841

Date: Dec. 08, '06

	Mechanical Property of Full Size Bolts				IDENTIFICATION	Chemical Composition %									
	Tensile Strength		Hardness	Heat Treatment		C	Si	Mn	P	S	Cu	Ni	Cr	Mo	B
	Load (lbf)	Position of fracture													
Spec.	40100	Part of Screw	Min. 34 MAX	800	30 52	15 30	Min. 60 Max. 60	Max. 40	Max. 50	-	-	-	-	-	
Average	49625	Part of Screw	31.6	869	31	25	82	7	7	9	4	5	1	27	

**NUT LOT NO.** BC821

	Mechanical Property of Full Size Nuts				IDENTIFICATION	Chemical Composition %									
	Hardness		Proof Load (Lbf)	Heat Treatment		C	Si	Mn	P	S	Cu	Ni	Cr		
	After 24 hr x 1000° F	HRB												Quench	Temper
Spec.	24-38	HRB 89	58450	800	20 55	-	Min. 60 Max. 60	Max. 40	Max. 50	-	-	-	-		
Mean/5pcs	28.6	-	ALL PASS	1562	45	24	81	22	34	18	7	14			

**WASHER LOT NO.** WB8754

	Mechanical Property of Full Size Washers				IDENTIFICATION	Chemical Composition %									
	Hardness		Proof Load (Lbf)	Heat Treatment		C	Si	Mn	P	S	Cu	Ni	Cr		
	38-45	HRB												Quench	Temper
Spec.	38-45	HRB 89	58450	800	37	-	-	Max. 40	Max. 50	-	-	-			
Mean/5 Pcs.	42.5	-	ALL PASS	1562	37	7	72	8	4	-	-	-			

Material used for the bolt, nut and washer were melted & manufactured in the USA. The product was manufactured in the USA to ASTM specifications. The bolt and nut are manufactured by Unyrite. We hereby certify that the material described has been manufactured and inspected satisfactory with requirement of the above specification.

Thread Accuracy (Bolt & Nut)	Bolt ASME B1.1 Class 2A Nut ANSI B1.1 Class 2B
------------------------------	---

REMARKS	12-13-DP OFFICIAL SEAL EAN MARHERIO NOTARY PUBLIC - STATE OF ILLINOIS MY COMMISSION EXPIRES: 10/18/09
---------	---

### Fastener Tension

Fastener Tension	Spec. (lbf.) 29000
Mean / 6 sets.	37558
Standard Deviation	1452

Chief of Quality Assurance Section

*[Signature]*

LOAD



# CHARTER STEEL

A Division of  
Charter Manufacturing Company, Inc.

## CHARTER STEEL TEST REPORT

Reverse Has Text And Codes

1658 Cold Springs Road  
Saukville, Wisconsin 53080  
(262) 268-2400  
1-800-437-8789  
FAX (262) 268-2570

**UNYTITE, INC.**  
**ONE UNYTITE DRIVE**  
**PERU, IL 61354-**  
**Attn: ATTEN: JEAN MARGHERIO**

Cust. P.O.	29646
Cust Part#	C10B30SC0.732D
Charter Sales Order	177723
Heat #	450150
Ship Lot #	502728
Grade#	10B30 M SK FG RHQ
Process	DD
Finish Size	0.732

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed below and on the reverse side, and that it satisfies those requirements.

Test Results of Heat Lot# 450150

Lab Code: 7388

Chemistry	C	MN	P	S	SI	NI	CR	MO	CU	SN	V
Wt%	0.31	0.82	0.007	0.007	0.250	0.04	0.05	0.01	0.09	0.006	0.001

AL	N	B	TI	NB
0.023	0.0060	0.0027	0.018	0.001

Jominy (HRC)	JOM01	JOM02	JOM03	JOM04	JOM05	JOM06	JOM07	JOM08	JOM09	JOM10	JOM11	JOM12
	53	51	51	48	32	23	22	21	21	20	20	0
	JOM13	JOM14	JOM15	JOM16	JOM18	JOM20	JOM22	JOM24	JOM26	JOM28	JOM30	JOM32
	0	0	0	0	0	0	0	0	0	0	0	0

JOMINY SAMPLE TYPE ENGLISH = R JOMINY LAB = 0358-01  
CHEM. DEVIATION EXT.-GREEN = N/R  
E45 INCLUSION LAB = 0358-02

Cleanliness	ASTM-E45 Method A			
	A	B	C	D
	Thin	1.0	1.0	0.0
Heavy	0.0	0.0	0.0	0.0

Test Results of Rolling Lot # 353989

QC DEVIATION EXT.-GREEN = N/R

Test Results of Processing Lot # 502728

	# of Tests	Min Value	Max Value	Mean Value	
TENSILE (KSI)	3	94.7	96.5	95.7	TENSILE LAB = 0358-02
REDUCTION OF AREA (%)	3	51	53	52	RA LAB = 0358-02
ROCKWELL B (HRBW)	3	90	92	91	RB LAB = 0358-02
WIRE SIZE (Inches)	13	0.731	0.732	0.731	
WIRE OUT OF ROUND (Inches)	13	0.000	0.000	0.000	

Specifications: Meets customer specifications with any applicable Charter Steel exceptions for the following customer documents:  
Customer Document = UNYTITE Revision = 5 Dated = 8-MAY-2003

Additional Comments:

Charter Steel  
Saukville, WI, USA



*Tim Leahy*  
Tim Leahy  
Manager of Quality Assurance  
12/04/2006

**CERTIFIED MATERIAL TEST REPORT**

<b>CUSTOMER ORDER NUMBER</b> P001071	<b>CUSTOMER PART NUMBER</b> B1045SC10000	<b>HEAT NUMBER</b> M22208	<b>WORK ORDER NUMBER</b> 202634 102	<b>DATE</b> 11/07/06
---	---	------------------------------	--	-------------------------

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

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

**ORDERED**

<b>GRADE</b> 1045	<b>SIZE</b> 1" RND	<b>LENGTH</b> 24' 10 1/2"
----------------------	-----------------------	------------------------------

**CUSTOMER SPECIFICATIONS**  
SAE 1045; ASTM E381-91

**CHEMICAL ANALYSIS - (BAR AVERAGE)**

C	Mn	P	S	Si	Ni	Cr	Mo	Cu	Sn	Al
0.45	0.81	0.022	0.034	0.24	0.07	0.14	0.03	0.18	0.007	0.003
V	Nb									
0.055	0.002									

**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= 0.004

PAGE 1

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

MACSTEEL  
3000 East Front Street  
Monroe, MI 48161

MACSTEEL-JACKSON   
MACSTEEL-FT SMITH   
MACSTEEL-MONROE

  
Quality Assurance Representative

**CERTIFIED MATERIAL TEST REPORT**

CUSTOMER ORDER NUMBER	CUSTOMER PART NUMBER	HEAT NUMBER	WORK ORDER NUMBER	DATE
P001071	B1045SC10000	M22208	202634 102	11/07/06

REPORT TO  
TRACO  
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" RND	24' 10 1/2"

**CUSTOMER SPECIFICATIONS**

SAE 1045; ASTM E381-91

REDUCTION RATIO

RATIO= 45.8 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  
3000 East Front Street  
Monroe, MI 48161

MACSTEEL-JACKSON   
MACSTEEL-FT SMITH   
MACSTEEL-MONROE

  
Quality Assurance Representative



B8754-



640 Lavoy Road  
Erie, MI 48133  
Phone: 734/848-2915 Fax: 734/848-8734

# CERTIFICATE OF ANALYSIS

CUSTOMER ORDER NO: 14543	CERTIFICATION NO: 2-217419	SHIPPER NO: 2-217419	CERTIFIED DATE: 10/18/06
CUSTOMER PART NO: P1480H01	RF	SIZE: .1220 <sub>x</sub> 5.5000 <sub>x</sub> COIL	
CUSTOMER:  PRESTIGE STAMPING INC. **  P O BOX 1086  WARREN MI 480901086		GRADE: SAE J403 1040	
MELTED AND MANUFACTURED IN THE U.S.A.			

ATTENTION:

~~All units of measurement for chemistry are in weight percent.~~

COIL NO.	HEAT NUMBER	CHEMISTRY AND MECHANICAL PROPERTIES
KE7801	9403080	C = 0.370 MN= 0.720 P = 0.008 S = 0.004 SI= 0.070 AL= 0.047

## RECEIVED

OCT 19 2006

Time           

*[Signature]*  
Agent for Heidman Steel Products, Inc.

THE ABOVE MECHANICAL AND CHEMICAL ANALYSES WERE SUPPLIED BY THE PRODUCING MILL OR TESTED ON OUR OWN EQUIPMENT.

Form No. FQC 001 Rev. 2

HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17528

Invoice No. B7010227

Invoice Date 01/05/07

Sales Order K08981

Cert No 30928

Inv Line No 230000

Item No PTU075225

Quantity 280

Lot No JH781A

Heat

450160

Assembly No

Haydon PO

A47782

JH781A

# INSPECTION CERTIFICATE

SET LOT NO.

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



Specification	Size	Quantity
ASTM F1852 Type 1	3/4-10 UNC X 2-1/4	36,131 pcs.
ASTM A563 Grade DH		
ASTM F436 Type 1		

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

**BOLT LOT NO.** JH781

Date: Dec. 14, '06

Mechanical Property of Full Size Bolts				Chemical Composition %													
Tensile Strength	Proof Load 28400 (Length Method)	Hardness		Heat Treatment		IDENTIFICATION											
		Load (lbf)	Position of fracture	HRC	Quench	Temper	C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100	Mo x 100	B x 10,000	
Spec.	40100	Min.	Part of Screw	34 MAX	—	Min.											800
Average	49575	Max.	Part of Screw	ALL PASS	1580	890	31	27	84	7	8	10	5	5	1	28	

**NUT LOT NO.** BD453

Mechanical Property of Full Size Nuts				Chemical Composition %												
Hardness (HRC)	Hardness After 24 hr x 1000° F HRB	Proof Load (Lbf)	Heat Treatment		IDENTIFICATION											
			Quench	Temper	C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100				
Spec.	24-38	Min.	HRB 89	58450												
Mean/5pcs	28.5	—	ALL PASS	1202	1562	45	21	69	29	21	11	15	—	—	—	—

**WASHER LOT NO.** WB8754

Mechanical Property of Washers				Chemical Composition %											
Hardness (HRC)	Hardness	Proof Load (Lbf)	Heat Treatment		IDENTIFICATION										
			Quench	Temper	C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100			
Spec.	38-45	Min.	HRB 89	58450											
Mean/5 Pcs.	42.5	—	ALL PASS	1202	1562	37	7	72	8	4	—	—	—	—	—

Material used for the bolt, nut and washer were melted & manufactured in the USA. The product was manufactured in the USA to ASTM specifications. The bolt and nut are manufactured by Unytite. We hereby certify that the material described has been manufactured and inspected satisfactory with requirement of the above specification.

Chief of Quality Assurance Section

Thread Accuracy (Bolt & Nut)	Thread Accuracy
Bolt	ASME B1.1 Class 2A
Nut	ANSI B1.1 Class 2B

Fastener Tension	Fastener Tension
Spec. (lbf)	Min. 29000
Mean / 6 sets.	35426
Standard Deviation	1158

**REMARKS:**  
OFFICIAL SEAL  
JEAN MARCHERIO  
NOTARY PUBLIC - STATE OF ILLINOIS  
MY COMMISSION EXPIRES: 10/18/09

LOAD



# CHARTER STEEL

## CHARTER STEEL TEST REPORT Reverse Has Text And Codes

A Division of  
Charter Manufacturing Company, Inc.

1658 Cold Springs Road  
Saukville, Wisconsin 53080  
(262) 268-2400  
1-800-437-8789  
FAX (262) 268-2570

**UNYTITE, INC.**  
**ONE UNYTITE DRIVE**  
**PERU, IL 61354-**  
**Attn: ATTEN: JEAN MARGHERIO**

Cust. P.O.	29646
Cust Part#	C10B30SCO.732D
Charter Sales Order	177723
Heat #	450160
Ship Lot #	501644
Grade#	10B30 M SK FG RHQ
Process	DD
Finish Size	0.732

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed below and on the reverse side, and that it satisfies those requirements.

### Test Results of Heat Lot# 450160

Lab Code: 7388

Chemistry	C	MN	P	S	SI	NI	CR	MO	CU	SN	V
Wt%	0.31	0.84	0.007	0.008	0.270	0.05	0.05	0.01	0.10	0.007	0.001

AL	N	B	TI	NB
0.023	0.0060	0.0028	0.021	0.001

Jominy (HRC)	JOM01	JOM02	JOM03	JOM04	JOM05	JOM06	JOM07	JOM08	JOM09	JOM10	JOM11	JOM12
	53	52	51	49	36	25	22	22	21	21	20	20
	JOM13	JOM14	JOM15	JOM16	JOM18	JOM20	JOM22	JOM24	JOM26	JOM28	JOM30	JOM32
	0	0	0	0	0	0	0	0	0	0	0	0

JOMINY SAMPLE TYPE ENGLISH = R JOMINY LAB = 0358-01  
CHEM. DEVIATION EXT.-GREEN = N/R  
E45 INCLUSION LAB = 0358-02

Cleanliness	ASTM-E45 Method A			
	A	B	C	D
	Thin	0.5	1.5	0.0
Heavy	0.0	0.0	0.0	0.0

### Test Results of Rolling Lot # 352876

QC DEVIATION EXT.-GREEN = N/R

### Test Results of Processing Lot # 501644

TENSILE (KSI)	# of Tests	Min Value	Max Value	Mean Value	TENSILE LAB = 0358-02
REDUCTION OF AREA (%)	3	95.4	97.2	96.4	RA LAB = 0358-02
ROCKWELL B (HRBW)	3	53	55	54	RB LAB = 0358-02
WIRE SIZE (Inches)	3	88	88	88	
WIRE OUT OF ROUND (Inches)	41	0.731	0.732	0.731	
QC DEVIATION EXT.-PROCESSED = N/R	41	0.000	0.000	0.000	

Specifications: Meets customer specifications with any applicable Charter Steel exceptions for the following customer documents:  
Customer Document = UNYTITE Revision = 5 Dated = 8-MAY-2003

Additional Comments:

Charter Steel  
Saukville, WI, USA



*Tim Leahy*  
Tim Leahy  
Manager of Quality Assurance  
11/15/2006

The following statements are applicable to the material described on the front of this Test Report:

1. Except as noted, the steel supplied for this order was melted, rolled and processed in the United States.
2. Mercury was not used during the manufacture of this product; nor was the steel contaminated with mercury during processing.
3. Unless directed by the customer, there are no welds in any of the coils produced for this order.
4. The laboratory that generated the analytical or test results can be identified by the following key:

Certificate Number	Lab Code	Laboratory		Address
0358-01	7388	<b>CSMD</b>	Charter Steel Melting Division	1658 Cold Springs Road, Saukville, WI 53080
0358-02	8171	<b>CSR/ CSPD</b>	Charter Steel Rolling/ Processing Division	1658 Cold Springs Road, Saukville, WI 53080
0358-03	123633	<b>P4</b>	Charter Steel Ohio Processing Division	6255 US Highway 23, Risingsun, OH 43457
0358-04	125544	<b>CSC</b>	Charter Steel Cleveland	4300 E. 49 <sup>th</sup> St., Cuyahoga Heights, OH 44125-1004
*	*	--	Subcontracted test performed by laboratory not in Charter Steel system	

5. When run by a Charter Steel laboratory, the following tests were performed according to the latest revisions of the specifications listed below, as noted in the Charter Steel Laboratory Quality Manual:

Test	Possible Laboratory	Specification
Chemistry Analysis	CSMD	ASTM E415; ASTM E1019
Macroetch	CSMD	ASTM E381
Hardenability (Jominy)	CSMD	ASTM A255; JIS G0561
Grain Size	CSMD	ASTM E112
Tensile Test	CSR/ CSPD, P4, CSC	ASTM E8; ASTM A370
Rockwell Hardness	CSR/ CSPD, P4, CSC	ASTM E18; ASTM A370
Microstructure (spheroidization)	CSR/ CSPD, P4	ASTM A892
Cleanliness	CSR/ CSPD, CSC	ASTM E45

Charter Steel has been accredited to perform all of the above tests by the American Association for Laboratory Accreditation (A2LA). These accreditations expire 01/31/07.

All other test results associated with a Charter Steel laboratory that appear on the front of this report, if any, were performed according to documented procedures developed by Charter Steel and are not accredited by A2LA.

6. The test results on the front of this report are the true values measured on the samples taken from the production lot. They do not apply to any other sample.
7. This test report cannot be reproduced or distributed except in full without the written permission of Charter Steel. The primary customer whose name and address appear on the front of this form may reproduce this test report, subject to the following restrictions:
  - It may be distributed only to their customers
  - Both sides of all pages must be reproduced in full
8. This certification is given subject to the terms and conditions of sale provided in Charter Steel's acknowledgment (designated by our Purchase Order number) to the customer's purchase order. Both Purchase Order numbers appear on the front page of this Report.
9. Where the customer has provided a specification, the results on the front of this test report conform to that specification unless otherwise noted on this test report.



**GERDAU AMERISTEEL**  
 ST PAUL STEEL MILL  
 1678 RED ROCK ROAD  
 ST PAUL, MN 55119 USA  
 (651) 731-5600

Chemical and Physical Test Report  
 MADE IN UNITED STATES

M-033913

PRODUCED IN: ST PAUL

SHIP TO UNYTITE INC 1 UNYTITE DRIVE PERU, IL 61354	INVOICE TO UNYTITE INC 1 UNYTITE DRIVE PERU, IL 61354	SHIP DATE 11/14/06	CUST. ACCOUNT NO 70000042
---	--	-----------------------	------------------------------

SHAPE + SIZE	GRADE	SPECIFICATION	SALES ORDER	CUST P.O. NUMBER
R159Q	C1045M23F	A576-90B(2000), A29/A29M-05	6072000-02	P001012-02
HEAT I.D. S77127	C	Mn .45 P .010 S .029 Si .21 Cu .21 Ni .11 Cr .15 Mo .050 V .024 Nb .002 N .0093 Sn .019 Al .002 Ti .00280 Ca .00160 Co .010		

Mechanical Test: Red R. 38.5 Std Dev=0 Idl Diam: 1.513  
 Cleanliness Test

VENDOR HEAT S77127, ROLL LOT M627511, QUALITY PROGRAM MANUAL REV. 1, DTD 6/10/05, FG(S-8)

Grain Test: Fine  
 Jominy: 5.0

J1	J2	J3	J4	J6	J7	J8	J9	J10	J12	J14	J16	J18	J20	J24	J28	J32
58	55	49	37	27	28	25	24	23	21	20	19	18	17	16	15	15

Customer Requirements SOURCE: MINNESOTA BILLETS CASTING: STRAND CAST

CUST ITEM NUMBER: B1045SC1.0000

*Debra L. Kariesch*



This material, including the billets, was produced and manufactured in the United States of America

Bhaskar Yalamanchilli  
 Quality Director  
 Gerdau Ameristeel

*Bhaskar*

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

Mgr. Metallurg. Svcs.  
 ST PAUL STEEL MILL

Seller warrants that all material furnished shall comply with specifications subject to standard published manufacturing variations. NO OTHER WARRANTIES, EXPRESSED OR IMPLIED, ARE MADE BY THE SELLER, AND SPECIFICALLY EXCLUDED ARE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. In no event shall seller be liable for indirect, consequential or punitive damages arising out of or related to the materials furnished by seller. Any claim for damages for materials that do not conform to specifications must be made from buyer immediately after delivery of same in order to allow the seller the opportunity to inspect the material in question.



**GERDAU AMERISTEEL**<sup>TM</sup>

**Lead and Mercury Content of Steel**

Lead and mercury are not purposefully introduced in the Gerdau Ameristeel steel manufacturing process, and are not present at levels that would require disclosure on Material Safety Data Sheets. To the best of our knowledge, no mercury is present in our steel products.

Sincerely,

Gerdau Ameristeel

A. James Turner  
Director, Environment & Quality



**GERDAU AMERISTEEL™**

**Weld Repair of Finished Product**

We hereby certify that weld repair of finished products is not performed at Gerda Ameristeel.

Sincerely,

Gerda Ameristeel

**A. James Turner**  
Director, Environment & Quality



B 8154



640 Lavoy Road  
Erie, MI 48133  
Phone: 734/848-2915 Fax: 734/848-8734

# CERTIFICATE OF ANALYSIS

CUSTOMER ORDER NO: 14543	CERTIFICATION NO: 2 -217419	SHIPPER NO: 2 -217419	CERTIFIED DATE: 10/18/06
CUSTOMER PART NO: P1480H01	RF	SIZE: .1220 <sub>x</sub> 5.5000 <sub>x</sub> COIL	
CUSTOMER:  PRESTIGE STAMPING INC. **  P O BOX 1086  WARREN MI 480901086		GRADE: SAE J403 1040	
COUNTRY OF ORIGIN: MELTED AND MANUFACTURED IN THE U.S.A.			

ATTENTION:

~~All units of measurement for chemistry are in weight percent.~~

COIL NO.	HEAT NUMBER	CHEMISTRY AND MECHANICAL PROPERTIES
KE7801	9403080	C = 0.370 MN= 0.720 P = 0.008 S = 0.004 SI= 0.070 AL= 0.047

## RECEIVED

OCT 19 2006

Time           

THE ABOVE MECHANICAL AND CHEMICAL ANALYSES WERE SUPPLIED BY THE PRODUCING MILL OR TESTED ON OUR OWN EQUIPMENT.  
Form No. FQC 001-Rev. 2

Agent for Heidman Steel Products, Inc.

HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17528

Invoice No. B7010227

Invoice Date 01/05/07

Sales Order K08981

Cert No Inv Line No Item No

Quantity Lot No

Heat

Assembly No

Haydon PO

30993 240000 PTU075200

190 JK551A

452780

A47284

JK551A

# INSPECTION CERTIFICATE

UNYTITE, INC.

One Unyrite Drive  
Peru, Illinois 61354

815-224-2221 — FAX # 815-224-3434



Specification	Size	Quantity
ASTM F1852 Type 1 ASTM A563 Grade DH ASTM F436 Type 1	3/4-10 UNC X 2	35,305 PCB.

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

BOLT LOT NO. JK551

Date: Dec. 21, '06

Mechanical Property of Full Size Bolts	Tensile Strength		Proof Load 28400 lb.	Heat Treatment		HRC	Quench	Temper	IDENTIFICATION	Chemical Composition %									
	Load (lb/f)	Position of fracture		T <sub>c</sub> (°C)	T <sub>t</sub> (°C)					C	Si	Mn	P	S	Cu	Ni	Cr	Mo	B
Spec.	Min. 40100	Part of Screw	Max. 4-0.0005 in.	34 MAX	1580	869	452780	32	27	78	8	8	8	5	7	2	23		
Average	50425	Part of Screw	ALL PASS	32.2	1580	869	452780	32	27	78	8	8	8	5	7	2	23		

NUT LOT NO. JJ561

Hardness (HRC)	Hardness After 24 hr x 1000° F HRB	Proof Load (lb)	Heat Treatment		IDENTIFICATION	Chemical Composition %											
			T <sub>c</sub> (°C)	Quench		Temper	C	Si	Mn	P	S	Cu	Ni	Cr			
Spec.	24-38	HRB 89	58450	Min. 800	800	577130	44	20	68	10	30	23	9	13			
Mean/Spec	28.6	—	ALL PASS	1562	1184	577130	44	20	68	10	30	23	9	13			

WASHER LOT NO. WB8754

Hardness (HRC)	IDENTIFICATION	Chemical Composition %										Fastener Tension		REMARKS		
		C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100	Spec. (lb)	Min.	Mean / 6 sets.	Standard Deviation			
Spec.	38-45	Heat No. 9403080	37	7	72	8	4	—	—	—	—	—	29000	35538	1383	
Mean/Spec	42.5	9403080	37	7	72	8	4	—	—	—	—	—	29000	35538	1383	

Material used for the bolt, nut and washer were melted & manufactured in the USA. The product was manufactured in the USA to ASTM specifications. The bolt and nut are manufactured by Unyrite. We hereby certify that the material described has been manufactured and inspected satisfactory with requirement of the above specification.

Chief of Quality Assurance Section  
*[Signature]*

NOT REPRODUCED WITHOUT PERMISSION EXPIRES 10/18/09  
OFFICIAL SEAL  
JEAN MARGHERIO  
PUBLIC STATE OF ILLINOIS

CHARTER  
STEEL

CHARTER  
STEEL

CHARTER STEEL TEST REPORT  
Reverse Has Text And Codes

A Division of  
Charter Manufacturing Company, Inc.

1658 Cold Springs Road  
Saukville, Wisconsin 53080  
(262) 268-2400  
1-800-437-8789  
FAX (262) 268-2570

29646	Cust. P.O.
C10B30SC0.732D	Cust. Part#
177723	Charter Sales Order
462780	Heat #
502850	Ship Lot #
10B30 M SK FG RHQ	Grade#
DD	Process
0.732	Finish Size

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed below and on the reverse side, and that it satisfies those requirements.

Test Results of Heat Lot# 462780

Lab Code: 7388	C	MN	P	S	SI	NI	CR	MO	CU	SN	V
Chemistry	0.32	0.78	0.008	0.008	0.270	0.05	0.07	0.02	0.08	0.005	0.001
Wt%	AL	N	B	TI	NB						
	0.23	0.0060	0.0023	0.020	0.001						

Jominy (HRC)	JOM01	JOM02	JOM03	JOM04	JOM05	JOM06	JOM07	JOM08	JOM09	JOM10	JOM11	JOM12
	54	52	51	49	33	24	22	22	22	21	20	20

JOMINITY LAB = R	JOMINITY LAB = 0358-01											
0	0	0	0	0	0	0	0	0	0	0	0	0
JOM13	JOM14	JOM15	JOM16	JOM18	JOM20	JOM22	JOM24	JOM26	JOM28	JOM30	JOM32	

Cleanliness

ASTM-E45 Method A	A	B	C	D
Thin	1.0	1.0	0.0	0.5
Heavy	0.0	0.0	0.0	0.0

OC DEVIATION EXT.-GREEN = N/R

Test Results of Rolling Lot # 353985

Test Results of Processing Lot # 502850

# of Tests	3	3	3	3	3	3	3	3	3	3	3	3
TENSILE (KSI)	95.8	97.3	97.3	95.8	97.3	97.3	95.8	97.3	97.3	95.8	97.3	95.8
REDUCTION OF AREA (%)	49	53	53	49	53	53	49	53	53	49	53	49
ROCKWELL B (HRBW)	90	92	92	90	92	92	90	92	92	90	92	90
WIRE SIZE (Inches)	0.732	0.732	0.732	0.732	0.732	0.732	0.732	0.732	0.732	0.732	0.732	0.732
WIRE OUT OF ROUND (Inches)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OC DEVIATION EXT.-PROCESSED = N/R												

Specifications: Meets customer specifications with any applicable Charter Steel exceptions for the following customer documents: Customer Document = UNYITE Revision = 5 Dated = 8-MAY-2003

Additional Comments:

Charter Steel  
Saukville, WI, USA

Fax number: ( ) Rem: Load1, Mail0, Fax0



Tim Leahy  
Manager of Quality Assurance  
12/05/2006

LOAD

**CERTIFICATE  
OF  
ANALYSIS**

B8754



640 Lavooy Road  
Erie, MI 48133  
Phone: 734/848-2915  
Fax: 734/848-8734

CUSTOMER ORDER NO: 14543		CERTIFICATION NO: 2-217419		SHIPPER NO: 2-217419		CERTIFIED DATE: 10/18/06	
CUSTOMER PART NO: P1480H01		RF		Size: .1220 x 5.5000 x COIL		GRADE: SAE J403 1040	
Customer: PRESTIGE STAMPING INC. **				P O BOX 1086			
WARREN				MI 480901086			

COIL NO. HEAT NUMBER CHEMISTRY AND MECHANICAL PROPERTIES

KH7801 9403080

C = 0.370 MN = 0.720 P = 0.008 S = 0.004 SI = 0.070  
AL = 0.047

ATTENTION: All units of measurement for chemistry are in weight percent.

**RECEIVED**

OCT 19 2006

Time

Agent for Heidman Steel Products, Inc.

THE ABOVE MECHANICAL AND CHEMICAL ANALYSES WERE SUPPLIED BY THE PRODUCING MILL TESTED ON OUR OWN EQUIPMENT. Form No. POC 001 Rev. 2



**GERDAU AMERISTEEL**

ST PAUL STEEL MILL  
1678 RED ROCK ROAD  
ST PAUL, MN 55119 USA  
(851) 731-5600

Chemical and Physical Test Report  
MADE IN UNITED STATES

M-034027

PRODUCED IN: ST PAUL

SHIP TO UNYTE INC 1 UNYTE DRIVE PERU, IL 61354	INVOICE TO UNYTE INC 1 UNYTE DRIVE PERU, IL 61354	SHIP DATE 11/18/06	CUST. ACCOUNT NO 70000042
---	--	-----------------------	------------------------------

SHAPE + SIZE RISBQ HEAT ID. S77130	GRADE C1045M23F	SPECIFICATION A578-90/92(2000) A29A23M-05	SALES ORDER 6072000-03	CUST P.O. NUMBER P007012-03													
	C	Mn	P	S	SI	Cu	Ni	Cr	Mo	V	Nb	N	Sn	Al	Ti	Ca	Co
	.41	.66	.010	.030	.20	.25	.08	.13	.020	.027	.001	.0085	.022	.002	.00280	.00220	.008

Mechanical Test: Red R 38.5 Std Dev'd | Idl Diam: 1.319  
 Cleanliness Test: FG(S-B), ROLL LOT M627596, QUALITY PROGRAM MANUAL REV. 1 DTD 8/10/05

Grain Test: Jominy:	Grain Size Units 5.0 Fine	J1	J2	J3	J4	J5	J6	J7	J8	J9	J10	J12	J14	J16	J18	J20	J24	J28	J32
		50	54	40	34	28.2	25	24	23	22	21	19	18	18	17	16	15	14	14

Customer Requirements SOURCE: MINNESOTA BILLETS CASTING: STRAND CAST  
 CUST ITEM NUMBER: B104SSC1.0000

*Debra Kariesch*



This material, including the bills, was produced and manufactured in the United States of America

*Shackley*

Bhaskar Valmankar  
Quality Director  
Gerdau Ameristeel

Mgr. Marketing, Svcs.  
ST PAUL STEEL MILL

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

Seller warrants that all material furnished shall comply with specifications subject to standard published manufacturing variations. NO OTHER WARRANTIES, EXPRESSED OR IMPLIED, ARE MADE BY THE SELLER, AND SPECIFICALLY EXCLUDED ARE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. In no event shall seller be liable for indirect, consequential or punitive damages arising out of or related to the materials furnished by seller. Any claim for damages for materials that do not conform to specifications must be made from buyer to seller immediately after delivery of same in order to allow the opportunity to inspect the material in question.

**Lead and Mercury Content of Steel**

Lead and mercury are not purposefully introduced in the Gerdau Ameristeel steel manufacturing process, and are not present at levels that would require disclosure on Material Safety Data Sheets. To the best of our knowledge, no mercury is present in our steel products.

Sincerely,

Gerdau Ameristeel



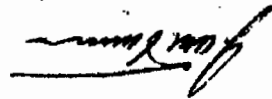
A. James Turner  
Director, Environment & Quality

Weld Repair of Finished Product

We hereby certify that weld repair of finished products is not performed at Gerda Ameristeel.

Sincerely,

Gerda Ameristeel



A. James Turner  
Director, Environment & Quality





- Charter Steel has been accredited to perform all of the above tests by the American Association for Laboratory Accreditation (A2LA). These accreditations expire 01/31/07.
- All other test results associated with a Charter Steel laboratory that appear on the front of this report, if any, were performed according to documented procedures developed by Charter Steel and are not accredited by A2LA.
6. The test results on the front of this report are the true values measured on the samples taken from the production lot. They do not apply to any other sample.
  7. This test report cannot be reproduced or distributed except in full without the written permission of Charter Steel. The primary customer whose name and address appear on the front of this form may reproduce this test report, subject to the following restrictions:
    - It may be distributed only to their customers
    - Both sides of all pages must be reproduced in full
  8. This certification is given subject to the terms and conditions of sale provided in Charter Steel's acknowledgment (designated by our Purchase Order number) to the customer's purchase order. Both Purchase Order numbers appear on the front page of this Report.
  9. Where the customer has provided a specification, the results on the front of this test report conform to that specification unless otherwise noted on this test report.

Test	Possible Laboratory	Specification
Chemistry Analysis	CAMD	ASTM E415; ASTM E1019
Macroetch	CAMD	ASTM E381
Hardenability (Jominy)	CAMD	ASTM A255; JIS G0561
Grain Size	CAMD	ASTM E112
Tensile Test	CSPD/CSPD, P4, CSC	ASTM E8; ASTM A370
Rockwell Hardness	CSPD/CSPD, P4, CSC	ASTM E18; ASTM A370
Microstructure (spheroidization)	CSPD/CSPD, P4	ASTM A892
Cleanliness	CSPD/CSPD, CSC	ASTM E45

5. When run by a Charter Steel laboratory, the following tests were performed according to the latest revisions of the specifications listed below, as noted in the Charter Steel Laboratory Quality Manual:

Certificate Number	Lab Code	Laboratory	Address
0358-01	7388	Charter Steel Melting Division	1658 Cold Springs Road, Saukville, WI 53080
0358-02	8171	Charter Steel Rolling/Processing Division	1658 Cold Springs Road, Saukville, WI 53080
0358-03	123833	Charter Steel Ohio Processing Division	6255 US Highway 28, RisingSun, OH 43457
0358-04	125544	Charter Steel Cleveland	4300 E. 49th St., Cuyahoga Heights, OH 44125-1004
	*		Subcontracted test performed by laboratory not in Charter Steel system
	-		

4. The laboratory that generated the analytical or test results can be identified by the following key:
  3. Unless directed by the customer, there are no welds in any of the coils produced for this order.
  2. Mercury was not used during the manufacture of this product; nor was the steel contaminated with mercury during processing.
  1. Except as noted, the steel supplied for this order was melted, rolled and processed in the United States.
- The following statements are applicable to the material described on the front of this Test Report:

# HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17528

Invoice No. B7010227

Invoice Date 01/05/07

Sales Order K08981

Cert No Inv Line No Item No

Quantity Lot No

Assembly No Haydon PO

30898 250000 PTU075175

725 BC832A

Heat 7327593

A47284

# INSPECTION CERTIFICATE

BC832A

SET LOT NO.

**UNYTITE, INC.**

One Unytite Drive  
Peru, Illinois 61354

815-224-2221 — FAX # 815-224-3434




Specification	Size	Quantity
ASTM F1852 Type 1	3/4-10 UNC X 1-3/4	20,763 pcs.
ASTM A563 Grade DH		
ASTM F436 Type 1		

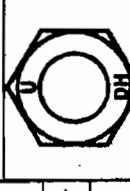

Mechanical properties tested in accordance to ASTM F606/F606M, ASTM A370, ASTM E18

Date: NOV. 14, '06

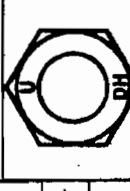
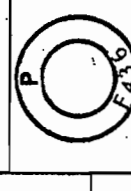
**BOLT LOT NO.** BC832

Mechanical Property of Full Size Bolts				Chemical Composition %														
Tensile Strength	Proof Load 28200 (Length Method)	Hardness		Heat Treatment		IDENTIFICATION												
		Load (lbf)	Position of fracture	Quench	Temper	C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100	Mo x 100	B x 10,000			
Spec.	40100	Min.	Part of Screw	Max.	Min.											800		
Average	49625	Max.	Part of Screw	HRC	Quench	Temper												
			49625	34 MAX	800	869												
			ALL PASS	31.9	1580	869												

**NUT LOT NO.** BC812

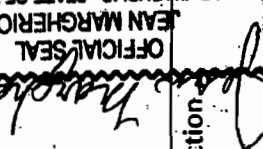
Mechanical Property of Full Size Nuts				Chemical Composition %														
Hardness After 24 hr x 1000° F HRB	Proof Load (Lbf)	Heat Treatment		IDENTIFICATION		IDENTIFICATION												
		Quench	Temper	Quench	Temper	C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100					
Spec.	58450	Min.	800															
Mean/5pcs	28.3	HRB 89	800															
			1562	1202														

**WASHER LOT NO.** WB8643

Mechanical Property of Full Size Washers				Chemical Composition %														
Hardness (HRC)	Proof Load (Lbf)	Heat Treatment		IDENTIFICATION		IDENTIFICATION												
		Quench	Temper	Quench	Temper	C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100					
Spec.	38-45	Min.	800															
Mean/5 Pcs.	42.5	HRB 89	800															
			1562	1202														

Material used for the bolt, nut and washer were melted & manufactured in the USA. The product was manufactured in the USA to ASTM specifications. The bolt and nut are manufactured by Unytite. We hereby certify that the material described has been manufactured and inspected satisfactory with requirement of the above specification.

Thread Accuracy (Bolt & Nut)	
Bolt	ASME B1.1 Class 2A
Nut	ANSI B1.1 Class 2B

REMARKS
 OFFICIAL SEAL JEAN MARGHERIO NOTARY PUBLIC - STATE OF ILLINOIS MY COMMISSION EXPIRES 10/18/08 11-15-06

Chief of Quality Assurance Section



1807 EAST 28TH ST.  
PHONE: 330-438-5694

LORAIN, OH 44055  
FAX: 330-438-5905

CERTIFICATE OF TESTS

REPUBLIC ENGINEERED PRODUCTS

August 11, 2006

PURCHASE ORD: 13764  
PART NUMBER: 3BC750U  
ORDER NUMBER: 0449628 - 01  
HEAT: 7327593

PURCHASE ORDER DATE: 1/25/2006  
ACCOUNT NUMBER: 5376-1348-01  
SCHEDULE: 1794-82  
REVISION: 1

PAGE 1 OF 2

CHARGE ADDRESS

SHIP TO

O & K AMERICAN  
4630 WEST 55TH ST  
CHICAGO, IL 60632

O & K AMERICAN  
MIKE PASEK  
4630 WEST 55TH ST  
CHICAGO, IL 60632

*09/15/2006*

MATERIAL DESCRIPTION

HOT ROLLED STEEL COILS CARBON O&K AMERICAN SPEC #OKA-009 PART #3BC750U REVISION 3 DTD 01/09/01 EXC  
CHEM, APPENDIX II (10B30M) GRADE-10B30-MOD FINE GRAIN COLD WORKING QUALITY FIXED PRACTICE PART  
RESTRICTED CHEMISTRY RESTRICTED MAX INCIDENTAL ELEMENTS  
SIZE: RDS .7500 DIAM X COIL  
RDS 19.0500MM DIAM X COIL

LADLE CHEMISTRY %

C	MN	P	S	SI	CU	NI	CR
0.31	0.80	0.009	0.012	0.23	0.03	0.05	0.07
V	MO	SN	AL	TI	B	CB	N
0.004	0.02	0.001	0.029	0.028	0.0015	0.001	0.0038

CALCULATED TESTS

REDUCTION RATIO 81.5 TO 1

ENITIC GRAIN SIZE 5 OR FINER BASED ON A TOTAL ALUMINUM CONTENT EQUAL TO OR GREATER THAN .020% PER  
ASTM A29.

SEMI - FINISHED RESULTS

JOMINY HARDNESS TEST SAE J406/ASTM A255  
1 2 3 4 5 6 7 8 9 10  
51 50 49 46 39 29 25 23 21 20

FINISHED SIZE RESULTS

DECARBURIZATION TEST SAE J419/ASTM E1077  
ETCHANT = NITAL MAGNIFICATION = 100X  
TOTAL  
COMPLETE DEPTH  
INCHES INCHES  
PCE 13684 0 0.003

NOTES

REPUBLIC ENGINEERED PRODUCTS HEREBY 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 HAS BEEN APPROVED FOR CONFORMANCE TO THE SPECIFICATIONS.

CERTIFICATE OF TESTS SHALL NOT BE REPRODUCED EXCEPT IN FULL.

ALL TESTING HAS BEEN PERFORMED USING THE CURRENT REVISION OF THE TESTING SPECIFICATIONS.

RECORDING OF FALSE, FICTITIOUS OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHED  
AS A FELONY UNDER FED STATUES TITLE 18 CHAPTER 47.

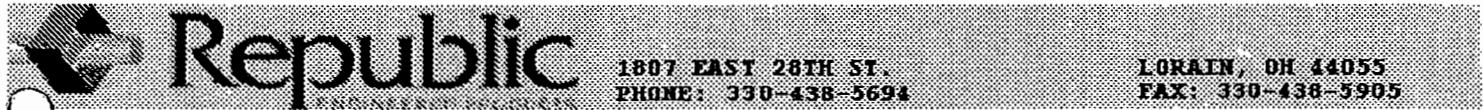
CHEMICAL ANALYSIS CONFORMS TO APPLICABLE SPECS: ASTM E415, ASTM E1019 AND/OR ASTM E1085.

THE MATERIAL WAS NOT EXPOSED TO MERCURY OR ANY METAL ALLOY THAT IS LIQUID AT AMBIENT TEMPERATURE  
DURING PROCESSING OR WHILE IN OUR POSSESSION.

A. SZELIGA  
MANAGER TECH. SERVICES

BY DEBRA L. BARTON

*A. Szeliga*



<b>CERTIFICATE OF TESTS</b> PURCHASE ORD: 13764 PART NUMBER: 3BC750U ORDER NUMBER: 0449628 - 01 HEAT: 7327593	<b>REPUBLIC ENGINEERED PRODUCTS</b>	<b>LORAIN, OH 44055</b> <b>FAX: 330-438-5905</b> <b>August 11, 2006</b> PURCHASE ORDER DATE: 1/25/2006 ACCOUNT NUMBER: 5376-1348-01 SCHEDULE: 1794-82 REVISION: 1
---	-------------------------------------	---

PAGE 2 OF 2

NO WELD OR WELD REPAIR WAS PERFORMED ON THIS MATERIAL.

----- NOTES (CONTINUED) -----

MANUFACTURED IN THE U.S.A.

----- SOURCE INFORMATION -----

MELT SOURCE: LORAIN BILLET      MELT COUNTRY: U.S.A      HOT ROLL SOURCE: LORAIN 9/10, U.S.A  
 MELT METHOD: BILLET      RED. RATIO: 81.5

----- END OF DATA ----- CC ----- END OF DATA -----

FAX    SHIP TO.    1 COPY      ATTENTION MIKE PASEK      17737674717  
 WITH SHIPMENT 1 COPY      PRINTED AT SHIPPING AREA  
 FILE            1 COPY

A. SZELIGA  
MANAGER TECH. SERVICES

BY DEBRA L. BARTON

M627513

P.O Box 64189  
1678 Red Rock Road  
Saint Paul, Minnesota 55164

# CERTIFIED TEST REPORT

Heat #:	S77125
Size:	1"
Product:	Round Bar
Grade:	C1045M23FC
Date Rolled:	08-06-2006
P.O	P001012
M.O #:	6072000-02
B1045SC1.0000	

### CHEMICAL ANALYSIS (WT %)

C	Mn	P	S	Si	Sn	Cu	Ni	Cr	Mo	Cb	V	Co	Al	Ti	Ca ppm	N ppm
0.45	.68	0.007	0.023	0.22	0.017	0.2	0.1	0.1	0.02	0.001	0.026	0.009	0.002	0.0028	13	91

MATERIAL 100% MELTED AND ROLLED IN THE USA. MANUFACTURING PROCESSES FOR THIS STEEL, WHICH MAY INCLUDE SCRAP MELTED IN AN ELECTRIC ARC FURNACE AND HOT ROLLING, HAVE BEEN PERFORMED AT GERDAU AMERISTEEL MINNESOTA, 1678 RED ROCK ROAD, SAINT PAUL MINNESOTA, USA. ALL PRODUCT PRODUCED FROM STRAND CAST BILLETS. NO WELD REPAIRMENT PERFORMED. STEEL NOT EXPOSED TO MERCURY OR ANY LIQUID ALLOY WHICH IS LIQUID AT AMBIENT TEMPERATURES DURING PROCESSING OR WHILE IN GERDAU AMERISTEEL MINNESOTA POSSESSION.

### 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

### MECHANICAL TEST REPORT

SPECIMEN AREA (in <sup>2</sup> )	YIELD (Kips)	YIELD (Ksi)	TENSILE (Kips)	TENSILE (Ksi)	GAUGE LENGTH (in)	% ELONG	BEND	% R.A.

### Additional Specifications/Comments:

A576-90b (2000)

A29/A29M-05

Quality Program Manual Rev. I, dtd 6/10/05

Grain Size: <b>Fine</b>	Reduction Ratio: <b>38.5:1</b>	C.E Per: <input type="text"/>	As Rolled surface Hardness
Coding: <input type="text"/>	D.I: <b>1.27</b> in. Ms: <b>610.6</b> Deg F.	C.E: <input type="text"/>	
			HBW
			HRC
			Test 1: <input type="text"/>
			Test 2: <input type="text"/>

CHARPY IMPACT TEST		
*	Test 1	Test 2
Temp (F)		
ft-lb 1		
ft-lb 2		
ft-lb 3		

ASTM E45 is not a laboratory accredited test.

Micro Clean Average									
At: <input type="checkbox"/>	Ah: <input type="checkbox"/>	Bt: <input type="checkbox"/>	Bh: <input type="checkbox"/>	Ct: <input type="checkbox"/>	Ch: <input type="checkbox"/>	Dt: <input type="checkbox"/>	Dh: <input type="checkbox"/>	S-Rating: <input type="checkbox"/>	O-Rating: <input type="checkbox"/>
Macro Etch: <input type="text"/>									

Accredited to:	ASTM Test Method									
	ASTM A370	ASTM E8	ASTM E10	ASTM E18	ASTM E23	ASTM E112	ASTM E255	ASTM E290	ASTM E415	ASTM E1019
ISO 17925	X	X	X	X				X	X	X
subcontractor (ISO 170 25)		*			*	*	*			

The above results relate only to the items tested.

Chemical tests performed in accordance with ASTM E415 and E1019. Mechanical tests performed in accordance with ASTM E8, E10, E18, E290 and A370. All other tests performed in accordance with the requirements of applicable specifications unless otherwise noted above. We hereby certify that the above test results are representative of those contained in the records of the company.

Any modification to this certificate as provided by Gerdau Ameristeel - Minnesota without the expressed written consent of Gerdau Ameristeel - Minnesota negates the validity of this test report. This report shall not be reproduced except in full, without the expressed written consent of Gerdau Ameristeel Minnesota. Gerdau Ameristeel - Minnesota is not responsible for the inability of this material to meet specific applications.

X Gerdau Ameristeel Minnesota, A2LA Certification #1055-01 Exp. 6/30/06

\* Denotes Testing By Sub-Contractor:  
Metallurgical Services Inc., A2LA Certification #510-01 Exp. 12/31/06  
Stork Twin City Testing, A2LA Certification #1479-01 Exp 12/31/06

Measurement of uncertainty information is available upon request.

SIGNED: \_\_\_\_\_  
DATE: 10-12-2006  
APPROVAL: \_\_\_\_\_

**QA Approval**  
*Ken Wong*  
**Ken Wong**

SWORN AND SUBSCRIBED TO BEFORE ME  
THIS DAY **Oct 2006**  
*Debra Karlesch*  
THIS CERTIFICATE IS NOT VALID UNLESS REQUESTED.  
**DEBRA L. KARLESCH**  
Notary Public-Minnesota  
My Commission Expires Jan 31, 2010

B8643



640 Lavoy Road  
Erie, MI 48133  
Phone: 734/848-2915 Fax: 734/848-8734

# CERTIFICATE OF ANALYSIS

CUSTOMER ORDER NO: 14356	CERTIFICATION NO: I-333499	SHIPPER NO: I-333499	CERTIFIED DATE: 09/12/06
CUSTOMER PART NO: P1480H00	RF	SIZE: .1220 <sub>x</sub> 5.5000 <sub>x</sub> COIL	GRADE: SAE J403 1040
CUSTOMER: PRESTIGE STAMPING INC. ** P O BOX 1086 WARREN MI 480901086		ORIGINATED AND MANUFACTURED IN THE U.S.A.	

ATTENTION:

~~All units of measurement for chemistry are in weight percent.~~

COIL NO.	HEAT NUMBER	CHEMISTRY AND MECHANICAL PROPERTIES
JN6204	B15521	C = 0.390 MN= 0.760 P = 0.007 S = 0.003 SI= 0.170 AL= 0.029

THE ABOVE MECHANICAL AND CHEMICAL ANALYSES WERE SUPPLIED  
BY THE PRODUCING MILL OR TESTED ON OUR OWN EQUIPMENT.  
Form No. FQC 001 Rev. 2

*[Handwritten Signature]*  
Agent for Heidman Steel Products, Inc.

# HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17528

Invoice No. B7010227

Invoice Date 01/05/07

Sales Order K08981

Cert No Invt Line No Item No

Quantity Lot No

Assembly No Haydon PO

22600 270000 HBA076100

5 C O F C

A42388



Bob Sadowski



Sincerely,

Our suppliers chemical and physical test reports, on all through hardened products are kept on file and are available upon request.

880-3/4(10) X 1 1/2 Hex Cap.

This letter will certify that the merchandise shipped to you against your P.O. #42388 has been purchased by Heads & Threads International from it's suppliers with the understanding that this product was manufactured to and conforms with the current and applicable ANSI/ASME, ASTM, SAE or IFI specifications as shown in the IFI Fasteners Manual sixth edition.

Haydon Bolts Inc  
1181 Unity Street  
Philadelphia Pa. 19124-3196

DATE 11/17/04



Heads & Threads International LLC  
200 Kennedy Drive  
Sayreville, NJ 08572  
Tel: 732.727.5800  
headsandthreads.com

Fax: Accounting 732.727.7130  
Corporate 732.727.9261  
Mills 732.727.5840  
Purchasing 732.727.3555  
Sales 732.727.5888

# HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17528

Invoice No. B7010227

Invoice Date 01/05/07

Sales Order K08981

Cert No Inv Line No Item No

Quantity Lot No

Assembly No

Haydon PO

22576 280000 HBA075900

5 C O F C

A42387

# PERRY JOHNSON REGISTRARS, INC.



## Certificate of Registration

Perry Johnson Registrars, Inc. has awarded the Quality Management System of

**Sigfast Inc. Summit Industries**

25515 Spring Parkway, Summit, Ohio 44130

and Roseland Avenue, Cleveland, Ohio 44115

to the ISO 9001:1998 standard for the following scope of supply:

Registered to ISO 9001:1998 (Based on including ISO 9002:1997)

Manufacture and distribution of metal fasteners for the automotive industry  
(Manufacturing, sales, and Warehousing Activities supported by Stoneville, OH Location)  
(Manufacturing Activities supported by Cleveland, OH Location)

This award is based on the following ISO 9001:1998 standard for the following scope of supply:  
Manufacture and distribution of metal fasteners for the automotive industry  
(Manufacturing, sales, and Warehousing Activities supported by Stoneville, OH Location)  
(Manufacturing Activities supported by Cleveland, OH Location)

*John Johnson*  
FOR THE REGISTRARS

John Johnson, President  
Perry Johnson Registrars, Inc. (PJI)  
26375 Regent Court, Suite 1110  
Columbiana, Ohio 43086  
(741) 238-3333



Issue Date: September 09, 2004  
Expiration Date: December 14, 2006  
Certificate No: E2004-02538

The quality of this certificate is maintained through ongoing surveillance.

# HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17528

Invoice No. B7010227

Invoice Date 01/05/07

Sales Order K08981

Cert No 22574

Inv Line No 290000

Item No HBA075800

Quantity 5

Lot No C O F C

Heat

Assembly No

Haydon PO

A42387



# PERRY JOHNSON REGISTRARS, INC.

## Certificate of Registration

*Perry Johnson Registrars, Inc. has assessed the Quality Management System of:*

*Stelfast Inc. Summit Industries*

*2774 Stelfast Parkway, Strongsville, OH 44136  
1000 Roseland Avenue, Cleveland, OH 44115*

*(Certificate called the Registration of a body, declares that  
Organization is fully compliant with*

*Registered to QS 9000:1998 (Based on and including ISO 9002:1994)*

*This Registration is in effect to the following scope(s) namely:*

*Manufacture and Distribution of Metal Fasteners for the Automotive Industry  
(Purchasing, Sales, and Warehousing Activities Supported by Strongsville, OH Location)  
(Manufacturing Activities Supported by Cleveland, OH Location)*

*Supplier has been audited in accordance with the requirements of the QS 9000, Appendix B, "Code of Practice".*

*Each product shall be manufactured by this Organization at its manufacturing or service shall be offered at a  
plant only the address given above. This Registration is granted subject to the system rules governing the  
Registration reference above, and the Organization hereby certifies with this statement, body duty to observe  
and comply with this said rule.*

For EIR:

Terry Hobbs, President

Perry Johnson Registrars, Inc. (EIR)  
26325 Evergreen, Suite 1340  
Southfield, Michigan 48076  
(248) 358-5388



PERRY JOHNSON REGISTRARS, INC.

*The quality of this certificate is mandated through ongoing surveillance.*

Issue Date

September 09, 2004

Expiration Date

December 14, 2006

Certificate No.

E2004-02558

HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17528

Invoice No. B7010227

Invoice Date 01/05/07

Sales Order K08981

Cert No Inv Line No Item No

Quantity

Lot No

Heat

Assembly No

Haydon PO

23252 300000 HBA075700

10 C OF C

C OF C

A43413



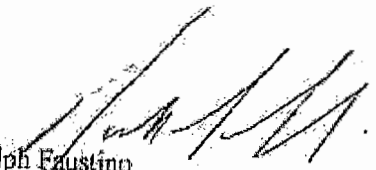
**STELFAST<sup>®</sup> INC.**  
ISO 9002 / QS 9000 CERTIFIED

SALES OFFICE  
901 - 13th Avenue  
Prospect Park, PA 19076  
Phone: (877) 999-7027  
(610) 534-5624  
Fax: (610) 534-5664

**Certificate of Compliance**

To Whom It May Concern:

We certify that the products shown in our catalog conform to IFT standards.

  
Ralph Faustino  
Philadelphia Sales Manager

E-mail: [info@stelfast.com](mailto:info@stelfast.com) • Website: [www.stelfast.com](http://www.stelfast.com)

Atlanta • Cleveland • Dallas • Edmonton • Houston • Montreal • Toronto

# HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17528

Invoice No. B7010227

Invoice Date 01/05/07

Sales Order K08981

Cert No 24301

Quantity 25

Heat C OF C

Assembly No

Haydon PO A43770

Inv Line No 310000

Lot No C OF C

Heat C OF C

Haydon PO A43770





**STELFAST<sup>®</sup> INC.**

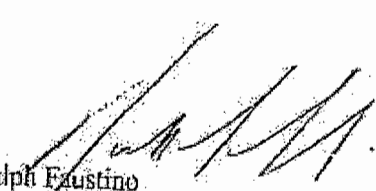
ISO 9002 / QS 9000 CERTIFIED

SALES OFFICE  
901 - 13th Avenue  
Prospect Park, PA 19076  
Phone: (877) 999-7027  
(610) 534-5624  
Fax: (610) 534-5664

**Certificate of Compliance**

To Whom It May Concern:

We certify that the products shown in our catalog conform to IFT standards.

  
Ralph Faustino  
Philadelphia Sales Manager

E-mail: [info@stelfast.com](mailto:info@stelfast.com) • Website: [www.stelfast.com](http://www.stelfast.com)  
Atlanta • Cleveland • Dallas • Edmonton • Houston • Montreal • Toronto

# HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17528

Invoice No. B7010227

Invoice Date 01/05/07

Sales Order K08981

Cert No 30726

Quantity 25

Heat

Assembly No

Haydon PO

Inv Line No 320000

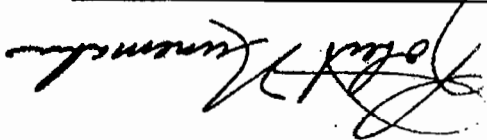
Lot No

A45586

WFA075

GENERAL MANAGER

BY:



COATESVILLE WASHER COMPANY

I HEREBY CERTIFY THAT THE ABOVE SUPPLIES CALLED FOR BY PURCHASE ORDER/CONTRACT A45586 WERE MANUFACTURED IN CHINA USING MILD STEEL, IN ACCORDANCE WITH ALL APPLICABLE SPECIFICATIONS, AND THAT SUCH SUPPLIES WERE IN THE QUANTITY AND QUALITY CALLED FOR, AND WERE IN ALL RESPECTS IN ACCORDANCE WITH THE APPLICABLE SPECIFICATIONS. ALL DIMENSIONAL INSPECTION REPORTS ARE ON FILE AND AVAILABLE FOR REVIEW UPON REQUEST. CHEMICAL & PHYSICAL REPORTS ARE NOT AVAILABLE SINCE THEY ARE OPTIONAL AND NOT REQUIRED BY THE ABOVE REFERENCED SPECIFICATIONS.

GENTLEMEN:

FINISH : PLAIN, ZINC & CLEAR DICHROMATE , HOT DIP GALV. & MECH. GALV.

SPEC.: ASTM F844 & ANSI B18.22.1

PART: WASHERS, STEEL, PLAIN(FLAT), UNHARDENED FOR GENERAL USE.

DATE: November 28, 2006

TO: HAYDON BOLTS, INC.  
1181 UNITY STREET  
PHILADELPHIA, PA 19124

**CERTIFICATE OF COMPLIANCE**

DEC 01 2006

COATESVILLE WASHER COMPANY

DEC 01 2006



# HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17528

Invoice No. B7010227

Invoice Date 01/05/07

Sales Order K08981

Cert No 30663

Quantity 100

Heat 738658

Assembly No

Haydon PO A47580

Inv Line No 350000

Item No AAA075200

Lot No 027600

Haydon PO A47580

# TEST REPORT

SLSB, LLC dba St. Louis Screw & Bolt  
 6900 N. Broadway  
 PO Box 470037  
 St. Louis, MO 63147

PH: 800-237-7059  
 FAX: 314-389-7510

St. Louis Screw & Bolt  
 1887  
 St. Louis, MO 63147

LOT #: **027600**

**PRODUCTION INFORMATION:**

PART#: AAA075200	SIZE: 3/4(10)UNC2AX2	LOT#: 027600	DESCRIPTION: HHS	ASTM SPEC: A325-1 04B	MFG DATE: 10/25/06	FINISH: PLAIN
------------------	----------------------	--------------	------------------	-----------------------	--------------------	---------------

**CHEMISTRY FROM RAW MATERIAL SUPPLIER:**

GRADE: 1045	HEAT NO: 738658	ASTM SPEC: A29	STEEL MILL SUPPLIER: BETA
-------------	-----------------	----------------	---------------------------

**CHEMICAL CONTENTS**

C	MN	P	S	Si	Ni	Cr	Mo	Cu	Sn	Al	N
0.44	0.86	0.0140	0.0200	0.21	0.04	0.22	0.010	0.07		0.0010	

**MECHANICAL PROPERTIES:**

PRODUCTION QTY: 49138	PCS SAMPLED: 6	ISSUE DATE: 10/27/06	SAMPLED BY: DH	TESTED BY: DH	ILL. PO# 711007-01	TEST METHODS ASTM F606	VISUAL INSPECTION PER ASTM F788: 29	PCS SAMPLED: 6	LOT PASSED: PASSED
-----------------------	----------------	----------------------	----------------	---------------	--------------------	------------------------	-------------------------------------	----------------	--------------------

**TENSILE STRENGTH**

WEDGE AXIAL	LBS. 40100	LBS. 28400	SURFACE 30	CORE N/A
-------------	------------	------------	------------	----------

**SAMPLES**

	1	2	3	4	5	6	7	8	AVG.
TENSILE LOAD	50200	51050	50300	50100	50200	50300			50358
PROOF LOAD	.0000	.0000	.0001	.0000	.0001	.0000			.0000
HRC- SURF	28.4	29.3	30.6	30.8	29.4	29.2			30
HRBW-CORE									

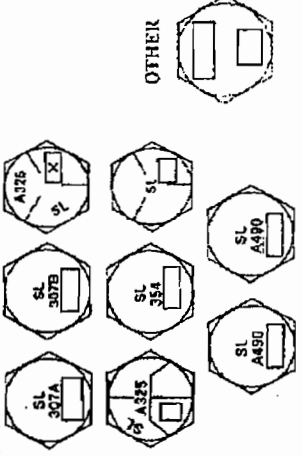
The SLSB LLC Laboratory has been accredited by the American Association for Laboratory Accreditation in the field of mechanical and tensile testing for the tests listed above, certificate #0936-01. The sampling plan meets or exceeds that which is required by the bolt spec of the AIA. The steel was made and melted in the USA, and the product was tested by SLSB LLC, St. Louis, MO, USA, free of mercury contamination. We certify that this samples tested conform to the ASTM specification listed above, and the data is a true representation of the information provided by the material supplier and our testing laboratory. This test certificate relates only to the items listed on this document and may not be reported or distributed except in full. Thread fit and dimensional requirements are compliant to ANSI B18.2.6 specification.

Signed: *Robert Halden* Date: 11/21/06

AMENDED  DATE: INITIAL:

\*Heats of steel used have not had not had the following materials intentionally added: bismuth, selenium, tellurium, or lead.

**MANUFACTURERS ID HEAD MARKING: SL**





P.O. Box 189002  
44225 Ulica Road  
Ulica, MI 48318  
Tel: (588) 323-8800  
Fax: (566) 323-8808

TEST CERTIFICATE

Customer:  
ST. LOUIS SCREW & BOLT CO  
Purchase Order No.  
SL12299

Date Printed: 08/30/2006

Report Number: BETA-1020289-1

Heat Number: 730058  
Order No.: 793377  
Grade: 1045B  
Type: SC  
Size: .765  
Condition: CSR  
MII: NUCOR STEEL  
Country: USA

Chemistry:

Analysis Provided by: NUCOR STEEL

Lab ID: 0780.01

%	<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>Al</b>	<b>B</b>	<b>V</b>	Analysis Performed by: NUCOR STEEL Lab ID: 0780.01
Results	0.44	0.86	0.0140	0.0200	0.21	0.07	0.04	0.22	0.010	0.0010	0.0001	0.00	

Feature Checked	Average											Inspecting Facility Name

This Document may not be reproduced except in full.

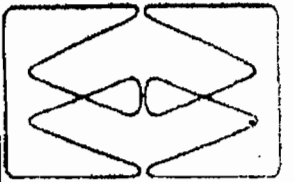
Comments

**Q. A. APPROVED**

Date 8/30/06

Signed [Signature]

Signed: 14B/A



**MICHIGAN WIRE PROCESSING COMPANY, INC.**

THIS REPORT SHALL NOT BE REPRODUCED IN WHOLE OR IN PART WITHOUT THE PRIOR WRITTEN APPROVAL OF MICHIGAN WIRE PROCESSING COMPANY, INC

We hereby certify that test results shown are correct as contained in the records of the company. These results relate only to the items tested.

William A. Dailey  
 Director of Quality Assurance

*William A. Dailey*

YMW4007	MWP12/43	LOT#1627C	MNP
Michigan Wire Processing Co., INC		8-28-06	44225 Ulica Rd.
2487 West Main St.		J94380	Ulica, MI US 48317
Lowell, MI 49331		8/29/2006	100239

PS-3 3-10-04	.765	1045ML1	8	42536					
73.9	76/77	58.1	80	1	1	0			

All tests were performed by Michigan Wire Processing, unless otherwise specified, in accordance with the following: Mechanical Properties per ASTM A 370, Rockwell Hardness per ASTM E18, Spheroidization per IFI-140 and Decarburization per ASTM E1077 and IFI 140. All tests performed to the current standard date, unless otherwise noted

738658 NUCOR

# HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17528

Invoice No. B7010227

Invoice Date 01/05/07

Sales Order K08981

Cert No Inv Line No Item No

Quantity

Lot No

Heat

Assembly No

Haydon PO

29963 360000 VUC075

100

06-38-026

419430

A46111





# DECKER

## MANUFACTURING CORPORATION

MANUFACTURERS OF INDUSTRIAL FASTENERS & PIPE PLUGS

703 North Clark Street Albion, Michigan 49224-0360

Phone 517-629-3955  
FAX 517-629-3535

### LABORATORY AND TESTING FACILITY

FORM 8.0

ACCREDITATIONS; AZLA #0499-01

Reaffirmed to be in compliance to current Rev Level

### ORIGINAL LABORATORY AND/OR INSPECTION REPORT

THIS IS A LEGAL DOCUMENT

NAME AND ADDRESS OF CLIENT: *Wayman Berts*

PAGE 1 OF 1  
LAB FILE ID NUMBER/LOT NUMBER: *06-38-026*

DMC PART NUMBER #: *034-1810*

ITEM DESCRIPTION: *3/4 x 1 1/2*  
2B HEAVY HEX NUT

GRADE ID MARK AND INSGIMA: ASTM A563 GRADE C + D

NAME(S) OF PERSON(S) SAMPLING: *W. EAGAN*

PROCEDURES ARE UNDER THE SUPERVISION OF DECKER MANUFACTURING CORPORATION'S

QUALITY DEPARTMENT.

PRODUCTION LOT SIZE: *5000*

TOTAL NO. OF SAMPLES INSPECTED AND/OR TESTED: 8

INSPECTION AND/OR TESTS: *7-6-06*

INSPECTION/TEST RESULTS: *7-10-06*

DESCRIPTION(S): ROCKWELL HRB

SPECIFICATION(S): ASTM E18

REQUIREMENTS: ASTM A563 GRADE C @ 78 HRB MIN.

EQUIPMENT ID #: 80178407

UNIT OF MEASUREMENT: KGF HRB W

UNIT OF MEASUREMENT: LBF

CORE READING

SPECIFICATION OR MATERIAL GRADE AS EVIDENCED: *C1010*

REMARKS OR DEVIATIONS:

HEAT TREAT, SURFACE TREATMENT, COATING, ETC.:  
TO THE SPECIFICATIONS ABOVE, THE SAMPLES INSPECTED AND/OR TESTED  
ARE RESULTS ONLY: CONFORM: X DO NOT CONFORM:

APPROVED SIGNATORY  
QUALITY MANAGER  
*Russell L. Wilson*

INSPECTED AND/OR TESTED BY:  
*[Signature]*  
Authorized Lab Technician

I CERTIFY THAT THE ABOVE TEST(S) WERE CONDUCTED IN ACCORDANCE WITH THE ABOVE STATED SPECIFICATION(S) AND THAT THE RESULTS ARE CORRECT AS ENTERED. THE ABOVE RESULTS ONLY PERTAIN TO THE SAMPLE ITEMS TESTED. SEE THE QUALITY MANUAL FOR MANUFACTURER REPORT CONTENT. THIS DOCUMENT SHALL NOT BE REPRODUCED IN FULL WITHOUT THE APPROVAL OF DECKER MANUFACTURING CORPORATION. DO NOT ERASE OR ALTER ANY ERRORS - DRAW A STRAIGHT LINE THROUGH AND INITIAL. SEE REVERSE OF THIS DOCUMENT FOR THE TERMS AND CONDITIONS OF THIS TEST REPORT.

COPY



CHARTER STEEL TEST REPORT Reverse Has Text And Codes

PER KEN	QUR PART
216803	CHARTER STEEL GROUP
419430	HEAT #
700659	SHIP LOT #
1020 A AK FG RHQ	GRADE
CC	PROCESS
1-1/8	FINISH SIZE

Ducker Manufacturing Corp.  
 703 N. Clark St.  
 Albion, MI 49224  
 Attn: Steve Kontke

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed below and on the reverse side, and that it satisfies those requirements.

Test Results of Heat Lot# 419430

LAW CODE: 7388											
DIMS. BILT SOURCE HEAT NUM. = N/R											
WRT	C	MN	P	S	SI	NI	CH	MO	CU	SN	V
0.19	0.37	0.006	0.015	0.090	0.05	0.05	0.02	0.03	0.007	0.001	
AL	N	B	J1	NB							
0.22	0.006	0.001	0.001	0.001							
CHEM. DEVIATION EXT.-GREEN = N/R											

Test Results of Rolling Lot # 34012D

# of Tests												
3	69	71	71	0	0	20	6	0.003	1.124	1.132	1.128	0.006
Min Value												
Max Value												
Mean Value												
RB LAB = 0358-02												
RC LAB = N/R												

Test Results of Processing Lot # 700659

DC DEVIATION EXT.-PROCESSED = N/R

Directions: Meets customer specifications with any applicable Charter Steel exceptions for the following customer documents: Customer Document = Revision = Date =

419430  
 5211  
 1.125

Tim Leahy  
 Manager of Quality Assurance  
 05/23/2006

Charter Steel  
 Albion, MI, USA  
 Fax number: (517) 829-3535 Rem: Lead0,Mail0,Fax1  
 Page: 1 of 1

PO# 17585

**RECEIVED**

**Cert Summary Page HAYDON BOLTS, INC.**

JAN 27 2007

**AMERICAN STEEL**

AMERICAN STEEL FABRICATORS INC      Customer PO 17585      Haydon PO

Invoice No. B7010701      Invoice Date 01/17/07      Sales Order K09478      Assembly No

Cert No Inv Line No Item No      Quantity Lot No      Heat      A44772

31054	40000	PTF100225	15	JH381A	448130		A44772
Description: 1(8)X 2-1/4 F2280/A490-1 TC BOLT DOMESTIC      Manufacturer: UNYTITE INC.							
30819	50000	PTU087200	15	BC571A	428740		A47284
Description: 7(8)X 2" F1852-1/A325 PT DOMESTIC      Manufacturer: UNYTITE INC.							
30016	70000	PTU075350	5	AI511A	403440		A44771
Description: 3/4(10)X 3-1/2 F1852-1/A325 PT DOMESTIC      Manufacturer: UNYTITE INC.							
31083	80000	PTU075300	10	JH961A	452770		A47284
Description: 3/4(10)X 3" F1852-1/A325 PT DOMESTIC      Manufacturer: UNYTITE INC.							
30988	90000	PTU075275	15	JH921A	450150		A47284
Description: 3/4(10)X 2-3/4 F1852-1/A325 PT DOMESTIC      Manufacturer: UNYTITE INC.							
31109	100000	PTU075250	140	JH871A	452770		A47284
Description: 3/4(10)X 2-1/2 F1852-1/A325 PT DOMESTIC      Manufacturer: UNYTITE INC.							
30928	110000	PTU075225	250	JH781A	450160		A47782
Description: 3/4(10)X 2-1/4 F1852-1/A325 PT DOMESTIC      Manufacturer: UNYTITE INC.							
31103	120000	PTU075200	300	JM061A	454700		A47284
Description: 3/4(10)X 2" F1852-1/A325 PT DOMESTIC      Manufacturer: UNYTITE INC.							
31106	130000	PTU075175	590	JK961A	454630		A47284
Description: 3/4(10)X 1-3/4 F1852-1/A325 PT DOMESTIC      Manufacturer: UNYTITE INC.							
18783	140000	HBA076000	5	C OF C			A42110
Description: 3/4(10)X 10" LC HEX CAP SCREW      Manufacturer: HEADS & THREADS INT'L LLC							
22576	150000	HBA075900	5	C OF C			A42387
Description: 3/4(10)X 9" LC HEX CAP SCREW      Manufacturer: STELFAST FASTENERS INC.							

**Cert Summary Page HAYDON BOLTS, INC.**

AMERICAN STEEL FABRICATORS INC

Customer PO 17585

Invoice No. B7010701

Invoice Date 01/17/07

Sales Order K09478

Cert No Inv Line No Item No Quantity Lot No Heat Assembly No Haydon PO

23252 160000 HBA075700 5 COFC C OF C A43413  
 Description: 3/4(10)X 7" LC HEX CAP SCREW Manufacturer: STELFAST FASTENERS INC.

24301 170000 HNA075 15 COFC C OF C A43770  
 Description: 3/4(10) HEX NUT A563A Manufacturer: STELFAST FASTENERS INC.

30726 180000 WFA075 15 COFC A45586  
 Description: 3/4 FLAT ROUND WASHER F844 Manufacturer: COATESVILLE WASHER CO.

# HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17585

Invoice No. B7010701

Invoice Date 01/17/07

Sales Order K09478

Cert No 31054

Inv Line No 40000

Item No PTF100225

Quantity 15

Lot No JH381A

Heat 448130

Assembly No

Haydon PO

A44772

# INSPECTION CERTIFICATE

SET LOT NO. JH381A

UNYTITE, INC.

One Unytite Drive  
Peru, Illinois 61354

815-224-2221 — FAX # 815-224-3434



Specification	Size	Quantity
ASTM A490 F2280 Type 1	1 - 8 UNC X 2-1/4	15,320 pcs.
ASTM A563 Grade DH		
ASTM F436 Type 1		

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

Date: Dec. 12, '06

BOLT LOT NO. JH3-81

Spec.	Mechanical Property of Full Size Bolts			Heat Treatment *F (°C)	IDENTIFICATION	Chemical Composition %											
	Tensile Strength	Proof Load (Hardness)				Quench	Temper	C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100	Mo x 100	B x 10,000
		Load (lbf)	Position of fracture														
90900	72700 lbf.			Min. 800		30			Max. 40	Max. 40							
104850	Max. +/- 0.0005 in.			800		Heat No.	48										
Average 8 pcs	111133	Part of Screw	ALL PASS	1580	448130	40	25	89	8	9	9	5	95	17	1		

NUT LOT NO. BB651

Hardness (HRC)	Hardness After 24 hr x 1000* F HR8	Proof load (lbf)	Heat Treatment *F (°C)		IDENTIFICATION	Chemical Composition %										Thread Accuracy (Bolt & Nut)
			Quench	Temper		C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100			
														Min.	Max.	
24 - 38	Min. HR8 89	106050	Min. 850			20			Max. 40	Max. 50						
28.3	---	ALL PASS	1184	1562		Heat No.	55	7	23	21	9	11				
					S77122	44	22	71	7	23	21	9	11			

WASHER LOT NO. WB8588

Hardness (HRC)	IDENTIFICATION	Chemical Composition %										Fastener Tension		REMARKS
		C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100	Spec. (lbf.)	Min.			
												Max.	Mean / 5 sets.	
38 - 45					Max. 40	Max. 50						67200		THESE BOLTS HAVE BEEN MAGNETIC PARTICLE INSPECTION IN ACCORDANCE WITH THE REQUIREMENTS OF SPECIFICATION ASTM A490
42.5		34	7	74	10	3			77784	3589				
Mean/5 Pcs.	9402601													

Material used for the bolt, nut and washer were melted & manufactured in the USA. The product was manufactured in the USA to ASTM specifications. The bolt and nut are manufactured and inspected satisfactory with requirement of the above specification.

Chief of Quality Assurance Section

*[Signature]*

12-13-06

NOTARY PUBLIC - STATE OF ILLINOIS  
MY COMMISSION EXPIRES 11/18/08  
JEAN MARGHERIO  
OFFICIAL SEAL

LOAD



# CHARTER STEEL

A Division of  
Charter Manufacturing Company, Inc.

## CHARTER STEEL TEST REPORT Reverse Has Text And Codes

1658 Cold Springs Road  
Saukville, Wisconsin 53080

[262] 268-2400

1-800-437-8789

FAX [262] 268-2570

UNYTITE, INC.  
ONE UNYTITE DRIVE  
PERU, IL 61354-  
Attn: ATTN: JEAN MARGHERIO

Cust. P.O.	PO01080
Cust. Part#	C4140SC0.984A
Charter Sales Order	224214
Heat #	448130
Ship Lot #	500209
Grade#	4140 A SK FG RHQ
Process	DFSAR
Finish Size	0.984

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed below and on the reverse side, and that it satisfies those requirements.

### Test Results of Heat Lot# 448130

Lab Code: 7388

Chemistry	C	MN	P	S	SI	NI	CR	MO	CU	SN	V
Wt%	0.40	0.89	0.008	0.009	0.250	0.05	0.95	0.17	0.09	0.008	0.001
	AL	N	B	TI	NB						
	0.023	0.0060	0.0001	0.001	0.002						

CHEM. DEVIATION EXT.-GREEN = N/R

### Test Results of Rolling Lot # 352084

QC DEVIATION EXT.-GREEN = N/R

### Test Results of Processing Lot # 500209

	# of Tests	Min Value	Max Value	Mean Value	
TENSILE (KSI)	3	91.1	92.5	91.7	TENSILE LAB = 0358-02
REDUCTION OF AREA (%)	3	54	62	58	RA LAB = 0358-02
ROCKWELL B (HRBW)	3	92	93	92	RB LAB = 0358-02
WIRE SIZE (Inches)	10	0.982	0.983	0.983	
WIRE OUT OF ROUND (Inches)	10	0.000	0.000	0.000	

NUM DECARB = 2    FREE FERRITE DECARB = 0.000    FREE FERR & PARTIAL DECARB = 0.004  
CP SPHERO % LAB = 0358-02    NUM SPHERO = 2    SPHERODIZATION (%) = 82.5  
QC DEVIATION EXT.-PROCESSED = N/R

Specifications:    Meets customer specifications with any applicable Charter Steel exceptions for the following customer documents:  
Customer Document = UNYTITE RMS-003    Revision = 2    Dated =

Additional Comments:

Charter Steel  
Saukville, WI, USA



*Tim Leahy*  
Tim Leahy  
Manager of Quality Assurance  
10/30/2006

Fax number: ( )    Rem: Load1,Mail0,Fax0



The following statements are applicable to the material described on the front of this Test Report:

1. Except as noted, the steel supplied for this order was melted, rolled and processed in the United States.
2. Mercury was not used during the manufacture of this product; nor was the steel contaminated with mercury during processing.
3. Unless directed by the customer, there are no welds in any of the coils produced for this order.
4. The laboratory that generated the analytical or test results can be identified by the following key:

Certificate Number	Lab Code	Laboratory		Address
0358-01	7388	<b>CSMD</b>	Charter Steel Melting Division	1658 Cold Springs Road, Saukville, WI 53080
0358-02	8171	<b>CSR/ CSPD</b>	Charter Steel Rolling/ Processing Division	1658 Cold Springs Road, Saukville, WI 53080
0358-03	123633	<b>P4</b>	Charter Steel Ohio Processing Division	6255 US Highway 23, Risingsun, OH 43457
0358-04	125544	<b>CSC</b>	Charter Steel Cleveland	4300 E. 49 <sup>th</sup> St., Cuyahoga Heights, OH 44125-1004
		-	Subcontracted test performed by laboratory not in Charter Steel system	

5. When run by a Charter Steel laboratory, the following tests were performed according to the latest revisions of the specifications listed below, as noted in the Charter Steel Laboratory Quality Manual:

Test	Possible Laboratory	Specification
Chemistry Analysis	CSMD	ASTM E415; ASTM E1019
Macroetch	CSMD	ASTM E381
Hardenability (Jominy)	CSMD	ASTM A255; JIS G0561
Grain Size	CSMD	ASTM E112
Tensile Test	CSR/CSR/CSR, P4, CSC	ASTM E8; ASTM A370
Rockwell Hardness	CSR/CSR/CSR, P4, CSC	ASTM E18; ASTM A370
Microstructure (spheroidization)	CSR/CSR/CSR, P4	ASTM A892
Cleanliness	CSR/CSR/CSR, CSC	ASTM E45

Charter Steel has been accredited to perform all of the above tests by the American Association for Laboratory Accreditation (A2LA). These accreditations expire 01/31/07.

All other test results associated with a Charter Steel laboratory that appear on the front of this report, if any, were performed according to documented procedures developed by Charter Steel and are not accredited by A2LA.

6. The test results on the front of this report are the true values measured on the samples taken from the production lot. They do not apply to any other sample.
7. This test report cannot be reproduced or distributed except in full without the written permission of Charter Steel. The primary customer whose name and address appear on the front of this form may reproduce this test report, subject to the following restrictions:
  - It may be distributed only to their customers
  - Both sides of all pages must be reproduced in full
8. This certification is given subject to the terms and conditions of sale provided in Charter Steel's acknowledgment (designated by our Purchase Order number) to the customer's purchase order. Both Purchase Order numbers appear on the front page of this Report.
9. Where the customer has provided a specification, the results on the front of this test report conform to that specification unless otherwise noted on this test report.



**GERDAU AMERISTEEL**

ST PAUL STEEL MILL  
1678 RED ROCK ROAD  
ST PAUL MN 55119 USA  
(651) 731-5800

Chemical and Physical Test Report  
MADE IN UNITED STATES

M-033866

PRODUCED IN: ST PAUL

SHIP TO UNYTITE INC 1 UNYTITE DRIVE PERU, IL 61354	INVOICE TO UNYTITE INC 1 UNYTITE DRIVE PERU, IL 61354	SHIP DATE 11/13/08	CUST. ACCOUNT NO 70000042
---	--	-----------------------	------------------------------

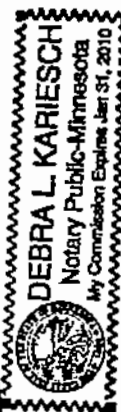
SHAPE + SIZE R1 1/4SBQ	GRADE C1045M23F	SPECIFICATION A576-90B(2000), A29/A29M-05	SALES ORDER 6072000-06	CUST P.O. NUMBER F001012-08													
HEAT I.D. S77122	C .44	Mn .71	P .007	S .023	Si .22	Cu .21	Ni .09	Cr .11	Mo .030	V .027	Nb .002	N .0084	Sn .019	Al .002	Ti .00250	Ca .00130	Co .008

Mechanical Test: Red R 24.6 Std Dev=0 ldl Diam: 1.359  
Cleanliness Test

FG(6-6), ROLL LOT M627631, VENDOR HEAT S77122, QUALITY PROG. MANUAL REV. 1, DTD 6/10/05  
Fine Grain Size Units 5.0

J1	J2	J3	J4	J5	J6	J7	J8	J9	J10	J11	J12	J13	J14	J15	J16	J17	J18	J19	J20	J21	J22	J23	J24	J25	J26	J27	J28	J29	J30	J31	J32
58	54	46	34	28.5	25	24	23	22	21	19	19	19	19	19	18	17	16	15	14	14	14	14	14	14	14	14	14	14	14	14	14

Customer Requirements SOURCE: MINNESOTA BILLETS CASTING: STRAND CAST  
CUST ITEM NUMBER: B1045SC1.2500

*Debra L. Kariesch*  
  
**DEBRA L. KARIESCH**  
 Notary Public-Minnesota  
 My Commission Expires Jan 31, 2010

This material, including the billets, was produced and manufactured in the United States of America

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

*Shaskoy*  
 Bhaskar Yalamanchili  
 Quality Director  
 Gerdau Ameristeel

Mgr. Metallurg. Svcs.  
ST PAUL STEEL MILL

Seller warrants that all material furnished shall comply with specifications subject to standard published manufacturing variations. NO OTHER WARRANTIES, EXPRESSED OR IMPLIED, ARE MADE BY THE SELLER, AND SPECIFICALLY EXCLUDED ARE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. In no event shall seller be liable for indirect, consequential or punitive damages arising out of or related to the materials furnished by seller. Any claim for damages for materials that do not conform to specifications must be made from buyer to seller immediately after delivery of same in order to allow the seller the opportunity to inspect the material in question.



**GERDAU AMERISTEEL**<sup>TM</sup>

**Lead and Mercury Content of Steel**

Lead and mercury are not purposefully introduced in the Gerdau Ameristeel steel manufacturing process, and are not present at levels that would require disclosure on Material Safety Data Sheets. To the best of our knowledge, no mercury is present in our steel products.

Sincerely,

Gerdau Ameristeel

A. James Turner  
Director, Environment & Quality



**Weld Repair of Finished Product**

We hereby certify that weld repair of finished products is not performed at Gerda Ameristeel.

Sincerely,

Gerda Ameristeel

A handwritten signature in black ink, appearing to read 'A. James Turner', is written over a horizontal line.

A. James Turner  
Director, Environment & Quality

B8588



640 Lavoy Road  
Erie, MI 48133  
Phone: 734/848-2915 Fax: 734/848-8734

# CERTIFICATE OF ANALYSIS

CUSTOMER ORDER NO: 14463	CERTIFICATION NO: 2-215069	SHIPPER NO: 2-215069	CERTIFIED DATE: 08/21/06
CUSTOMER PART NO: P2085HP400	DH	SIZE: .1360 <sub>x</sub> 5.5800 <sub>x</sub>	COIL
CUSTOMER:  PRESTIGE STAMPING INC. **  P O BOX 1086  WARREN MI 480901086		GRADE: SAE J403 1035	
COILS SPECIFIED AND MANUFACTURED IN THE U.S.A.			

ATTENTION:

~~All units of measurement for chemistry are in weight percent.~~

COIL NO.	HEAT NUMBER	CHEMISTRY AND MECHANICAL PROPERTIES
HT5901	9402601	C = 0.340 MN= 0.740 P = 0.010 S = 0.003 SI= 0.070. AL= 0.052
COMMENT: ** MILL CERTIFICATION WITH LOAD **		

## RECEIVED

AUG 29 2006

Time JA

THE ABOVE MECHANICAL AND CHEMICAL ANALYSES WERE SUPPLIED BY THE PRODUCING MILL OR TESTED ON OUR OWN EQUIPMENT.  
Form No. 1QC 001 Rev. 7

Agent for Heidman Steel Products, Inc.

# HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17585

Invoice No. B7010701

Invoice Date 01/17/07

Sales Order K09478

Cert No Inv Line No Item No

Quantity Lot No

Assembly No Haydon PO

30819 50000 PTU087200

15 BC571A

Heat 428740

A47284

BC571A

# INSPECTION CERTIFICATE

SET LOT NO.

Specification	Size	Quantity
ASTM F1852 Type 1		
ASTM A563 Grade DH	7/8 - 9 UNC X 2	23,425 pcs.
ASTM F436 Type 1		

**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

**BOLT LOT NO.** BC571

Date: NOV. 13, '06

Spec.	Mechanical Property of Full Size Bolts			IDENTIFICATION	Chemical Composition %									
	Tensile Strength	Hardness	Heat Treatment		C	Si	Mn	P	S	Cu	Ni	Cr	Mo	B
	Min. 55450	Part of Screw	Min. 800	30	15	Min. 60	Max. 40	Max. 50	-	-	-	-	-	-
Average	70125	Part of Screw	1580	32	25	81	7	6	9	6	6	1	29	

BC182

**NUT LOT NO.**

Hardness (HRC)	Hardness After 24 hr x 1000° F HRB	Proof Load (Lbf)	Heat Treatment	IDENTIFICATION	Chemical Composition %									
					Quench	Temper	C	Si	Mn	P	S	Cu	Ni	Cr
Spec. 24 - 38	HRB 89	80850	Min. 800	U DH	55	-	60	40	50	-	-	-	-	
Mean/5pcs 29.5	—	ALL PASS	1562	M21468	44	25	81	16	33	16	5	12		

**WASHER LOT NO.** WB6901

Hardness (HRC)	IDENTIFICATION	Chemical Composition %										
		C	Si	Mn	P	S	Cu	Ni	Cr			
										x 100	x 100	x 100
Spec. 38 - 45	Heat No. 0622888	-	-	-	Max. 40	Max. 50	-	-	-	-	-	-
Mean/5 Pcs. 40.6		36	9	62	10	5	-	-	-	-	-	-

Material used for the bolt, nut and washer were melted & manufactured in the USA. The product was manufactured in the USA to ASTM specifications. The bolt and nut are manufactured by Unytite. We hereby certify that the material described has been manufactured and inspected satisfactory with requirement of the above specification.

Thread Accuracy (Bolt & Nut)	Thread Accuracy
Bolt	ASME B1.1 Class 2A
Nut	ANSI B1.1 Class 2B

**REMARKS:**  
 OFFICIAL SEAL  
 JEAN MARCHERIO  
 NOTARY PUBLIC - STATE OF ILLINOIS  
 MY COMMISSION EXPIRES: 10/18/09  
 11-14-06

**Fastener Tension**

Fastener Tension	Fastener Tension
Spec. (lbf.)	Min. 41000
Mean / 6 sets.	49718
Standard Deviation	2980

Chief of Quality Assurance Section

*[Signature]*

LOAD



# CHARTER STEEL

## CHARTER STEEL TEST REPORT Reverse Has Text And Codes

A Division of  
Charter Manufacturing Company, Inc.

1658 Cold Springs Road  
Saukville, Wisconsin 53080

(262) 268-2400

1-800-437-8789

FAX (262) 268-2570

UNYTITE, INC.  
ONE UNYTITE DRIVE  
PERU, IL 61354-  
Attn: ATTN: JEAN MARGHERIO

Cust. P.O.	29647
Cust Part#	C10B30SC0.856D
Charter Sales Order	177724
Heat #	428740
Ship Lot #	497113
Grade#	10B30 M SK FG RHQ
Process	DD
Finish Size	0.856

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed below and on the reverse side, and that it satisfies those requirements.

### Test Results of Heat Lot# 428740

Lab Code: 7388

Chemistry	C	MN	P	S	SI	NI	CR	MO	CU	SN	V
Wt%	0.32	0.81	0.007	0.006	0.250	0.06	0.06	0.01	0.09	0.005	0.001

	AL	N	B	TI	NB
	0.024	0.0060	0.0029	0.021	0.001

Jominy (HRC)	JOM01	JOM02	JOM03	JOM04	JOM05	JOM06	JOM07	JOM08	JOM09	JOM10	JOM11	JOM12
	53	52	52	48	31	24	23	22	22	22	21	20
JOMINY	JOM13	JOM14	JOM15	JOM16	JOM18	JOM20	JOM22	JOM24	JOM26	JOM28	JOM30	JOM32
	0	0	0	0	0	0	0	0	0	0	0	0

JOMINY SAMPLE TYPE ENGLISH = R JOMINY LAB = 0358-01  
CHEM. DEVIATION EXT.-GREEN = N/R  
E45 INCLUSION LAB = 0358-02

Cleanliness	ASTM-E45 Method A			
	A	B	C	D
Thin	1.0	1.5	0.0	0.5
Heavy	0.0	0.0	0.0	0.0

### Test Results of Rolling Lot # 343228

QC DEVIATION EXT.-GREEN = N/R

### Test Results of Processing Lot # 497113

	# of Tests	Min Value	Max Value	Mean Value	
TENSILE (KSI)	3	98.3	98.8	98.6	TENSILE LAB = 0358-02
REDUCTION OF AREA (%)	3	52	53	52	RA LAB = 0358-02
ROCKWELL B (HRBW)	3	91	93	92	RB LAB = 0358-02
WIRE SIZE (Inches)	6	0.854	0.855	0.855	
WIRE OUT OF ROUND (Inches)	6	0.000	0.000	0.000	

QC DEVIATION EXT.-PROCESSED = N/R

Specifications: Meets customer specifications with any applicable Charter Steel exceptions for the following customer documents:  
Customer Document = UNYTITE Revision = 5 Dated = 8-MAY-2003

Additional Comments:

Charter Steel  
Saukville, WI, USA



Tim Leahy  
Manager of Quality Assurance  
09/18/2006



The following statements are applicable to the material described on the front of this Test Report:

1. Except as noted, the steel supplied for this order was melted, rolled and processed in the United States.
2. Mercury was not used during the manufacture of this product; nor was the steel contaminated with mercury during processing.
3. Unless directed by the customer, there are no welds in any of the coils produced for this order.
4. The laboratory that generated the analytical or test results can be identified by the following key:

Certificate Number	Lab Code	Laboratory		Address
0358-01	7388	<b>CSMD</b>	Charter Steel Melting Division	1658 Cold Springs Road, Saukville, WI 53080
0358-02	8171	<b>CSR/ CSPD</b>	Charter Steel Rolling/ Processing Division	1658 Cold Springs Road, Saukville, WI 53080
0358-03	123633	<b>P4</b>	Charter Steel Ohio Processing Division	6255 US Highway 23, Risingsun, OH 43457
0358-04	125544	<b>CSC</b>	Charter Steel Cleveland	4300 E. 49 <sup>th</sup> St., Cuyahoga Heights, OH 44125-1004
*	*	—	Subcontracted test performed by laboratory not in Charter Steel system	

5. When run by a Charter Steel laboratory, the following tests were performed according to the latest revisions of the specifications listed below, as noted in the Charter Steel Laboratory Quality Manual:

Test	Possible Laboratory	Specification
Chemistry Analysis	CSMD	ASTM E415; ASTM E1019
Macroetch	CSMD	ASTM E381
Hardenability (Jominy)	CSMD	ASTM A255; JIS G0561
Grain Size	CSMD	ASTM E112
Tensile Test	CSR/ CSPD, P4, CSC	ASTM E8; ASTM A370
Rockwell Hardness	CSR/ CSPD, P4, CSC	ASTM E18; ASTM A370
Microstructure (spheroidization)	CSR/ CSPD, P4	ASTM A892
Cleanliness	CSR/ CSPD, CSC	ASTM E45

Charter Steel has been accredited to perform all of the above tests by the American Association for Laboratory Accreditation (A2LA). These accreditations expire 01/31/07.

All other test results associated with a Charter Steel laboratory that appear on the front of this report, if any, were performed according to documented procedures developed by Charter Steel and are not accredited by A2LA.

6. The test results on the front of this report are the true values measured on the samples taken from the production lot. They do not apply to any other sample.
7. This test report cannot be reproduced or distributed except in full without the written permission of Charter Steel. The primary customer whose name and address appear on the front of this form may reproduce this test report, subject to the following restrictions:
  - It may be distributed only to their customers
  - Both sides of all pages must be reproduced in full
8. This certification is given subject to the terms and conditions of sale provided in Charter Steel's acknowledgment (designated by our Purchase Order number) to the customer's purchase order. Both Purchase Order numbers appear on the front page of this Report.
9. Where the customer has provided a specification, the results on the front of this test report conform to that specification unless otherwise noted on this test report.



**CERTIFIED MATERIAL TEST REPORT**

<b>CUSTOMER ORDER NUMBER</b> P001013	<b>CUSTOMER PART NUMBER</b> B1045SC11250	<b>HEAT NUMBER</b> M21468	<b>WORK ORDER NUMBER</b> 201181 102	<b>DATE</b> 9/18/06
---	---	------------------------------	--	------------------------

REPORT TO  
TRACO  
UNYTITE, INC.

ONE UNYTITE DRIVE  
PERU , IL 61354-9710

SHIP TO  
UNYTITE, INC.

ONE UNYTITE DRIVE  
PERU , IL 61354

**ORDERED**

<b>GRADE</b> 1045	<b>SIZE</b> 1 1/8" RND	<b>LENGTH</b> 24' 10 1/2"
----------------------	---------------------------	------------------------------

**CUSTOMER SPECIFICATIONS**

SAE 1045; ASTM E381-91

**CHEMICAL ANALYSIS - (BAR AVERAGE)**

C	Mn	P	S	Si	Ni	Cr	Mo	Cu	Sn	Al
0.44	0.81	0.016	0.033	0.25	0.05	0.12	0.02	0.16	0.007	0.004
V	Nb									
0.056	0.002									

GRAIN SIZE                      SPECIFICATION ASTM E112                      FINE GRAIN 5-8

MACROCLEANLINESS                      SPECIFICATION ASTM E381

PLATE I

PLATE II

	S	R	C	
AVERAGE	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  
3000 East Front Street  
Monroe, MI 48161

MACSTEEL-JACKSON   
MACSTEEL-FT SMITH   
MACSTEEL-MONROE

  
Quality Assurance Representative

**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
P001013	B1045SC11250	M21468	201181 102	9/18/06

REPORT TO  
TRACO  
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 1/8" RND	24' 10 1/2"

SAE 1045; ASTM E381-91

**CUSTOMER SPECIFICATIONS**

**REDUCTION RATIO**

RATIO= .36.2 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  
3000 East Front Street  
Monroe, MI 48161

MACSTEEL-JACKSON   
MACSTEEL-FT SMITH   
MACSTEEL-MONROE

  
Quality Assurance Representative



06-06-2005 15:45

GLOMAR STEEL CO. → 15867732298  
LSG BURNS HARBOR, INC.

NO: 727 - 0001

REQ. JOB. CONTACT NO.

TIME: 1330

BURNS HARBOR, IN 46304

0806-17028



4/06/05 519641

PROBATION ORDER NO. EH017-25967

S  
O  
L  
D  
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O  
GLOMAR STEEL CO  
64 MILL ST  
ECORSE MI 48229

GLOMAR STEEL CO  
64 MILL ST  
ECORSE MI 48229

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FROM BURNS HARBOR, IN ROUTE LFDE LAFOND EXPRESS

DATE SHPD 05/05/05

FRT COLLECT

VEHICLE IDENTIFICATION NO. PCS/PKGS KIND OF PACKAGE, DESCRIPTION OF ARTICLES, SPECIAL MARKS AND EXCEPTIONS WEIGHT (POUNDS)

TRLR 901 1 COIL STEEL SHEETS 44990  
DUNNAGE 10  
FLAT-TARP COV

B26901

ITEM NO.	DESCRIPTION	P/C	QUANTITY SHIPPED
CP HT#	PCS LFT/COIL# PKGS		
	SPEC: (15002000005006000) (0000000)		
	COLD ROLLED FINISHED SPECIAL OIL COILS		
	COIL P (2028-YYY-428)		
	-0000-		
	.136 (MIN) X 43 X COIL	P	
01	843L61830 1 591268	1 9355'	44990
	(THEO LB 44171)		
HT#	C MN P S SI CU NI		
0622888	0.36 0.62 0.010 0.005 0.091 0.020 0.010		
	CR MO V TI AL CB N		
		1 0.074	
	B		

ATTN: JULIE  
4 PAGES

melted and mfg in USA

1	1				358980-00	1	017	7	2182	140		X1
SYN	DEL	INV	SYN	DEL	CUST	TERMS	DIST	PSD	ZONE	PKT	FOB	TK

\*SHIPPER'S BILL ORDER COMPLETE

SHIPPING NOTICE

CAUTION-NO RECEIVED THROUGH SUPPLIER FOR LAY (LAC) OR DAMAGE IN TRANSIT-EXCEPT AS NOTED IN THIS BILL OF LADING

# HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Invoice No. B7010701

Invoice Date 01/17/07

Customer PO 17585

Sales Order K09478

Cert No 30016

Inv Line No 70000

Item No PTU075350

Quantity 5

Lot No AI511A

Heat

403440

Assembly No

Haydon PO

A44771

# INSPECTION CERTIFICATE

SET LOT NO. AI511A

**UNYRITE, INC.**

One Unyrite Drive  
Peru, Illinois 61354

815-224-2221 — FAX # 815-224-3434



Specification	Size	Quantity
ASTM F1852 Type 1 ASTM A563 Grade DH ASTM F436 Type 1	3/4-10 UNC X 3-1/2	7,945 pcs.

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

**BOLT LOT NO.** AI511

**Date:** Mar. 14, '06

Mechanical Property of Full Size Bolts				Chemical Composition %														
Tensile Strength	Proof Load 28400 (Length Method)	Hardness	HRC	Heat Treatment		IDENTIFICATION												
				Quench	Temper	C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100	Mo x 100	B x 10,000			
Min. 40100	Part of Screw	Max. 34 MAX			Min. 800												30	15
Average 51050	Part of Screw	ALL PASS	32.1	1580	869	403440	33	24	74	10	10	8	5	6	1		30	

**NUT LOT NO.** AF492

Mechanical Property of Full Size Nuts				Chemical Composition %														
Hardness After 24 hr x 1000° F HRB	Proof Load (Lbf)	Hardness	HRC	Heat Treatment		IDENTIFICATION												
				Quench	Temper	C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100					
Min. 24-38	58450	HRB 89			Min. 800										20		60	Max. 40
Mean/5 pcs. 29.6	ALL PASS	1562	1085	590283	43	18	67	10	20	9	15	9						

**WASHER LOT NO.** WB7395

Mechanical Property of Full Size Washers				Chemical Composition %														
Hardness (HRC)	Proof Load (Lbf)	Hardness	HRC	Heat Treatment		IDENTIFICATION												
				Quench	Temper	C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100					
Min. 38-45	58450	HRB 89			Min. 800										36		60	Max. 40
Mean/5 pcs. 40.8	ALL PASS	1562	1085	590283	43	18	67	10	20	9	15	9						

Material used for the bolt, nut and washer were melted & manufactured in the USA. The product was manufactured in the USA to ASTM specifications. The bolt and nut are manufactured by Unyrite. We hereby certify that the material described has been manufactured and inspected satisfactory with requirement of the above specification.

Thread Accuracy	
Bolt	ASME B1.1 Class 2A
Nut	ANSI B1.1 Class 2B

Fastener Tension	
Spec. (lbf)	Min. 29000
Mean / 6 sets.	37730
Standard Deviation	1280

REMARKS

Chief of Quality Assurance Section



# CHARTER STEEL

A Division of  
Charter Manufacturing Company, Inc.

## CHARTER STEEL TEST REPORT Reverse Has Text And Codes

1658 Cold Springs Road  
Saukville, Wisconsin 53080  
(262) 268-2400  
1-800-437-8789  
FAX (262) 268-2570

UNYTITE, INC.  
ONE UNYTITE DRIVE  
PERU, IL 61354  
Attn: ATEN: JEAN MARGHERIO

Cust. P.O.	29646
Cust. Part#	C10B30SCO.732D
Charter Sales Order	177723
Heat #	403440
Ship Lot #	478616
Grade#	10B30 M SK FG RHQ
Process	DD
Finish Size	0.732

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed below and on the reverse side, and that it satisfies those requirements.

### Test Results of Heat Lot# 403440

AB CODE: 7388												
Chemistry	C	MN	P	S	SI	NI	CR	MO	CU	SN	V	
%	0.33	0.74	0.010	0.010	0.240	0.05	0.06	0.01	0.08	0.008	0.001	
	AL	N	B	TI	NB							
	0.021	0.0070	0.0030	0.021	0.002							
Minim (HRC)	JOM01	JOM02	JOM03	JOM04	JOM05	JOM06	JOM07	JOM08	JOM09	JOM10	JOM11	JOM12
	53	52	51	47	31	24	22	21	21	21	20	0
	JOM13	JOM14	JOM15	JOM16	JOM18	JOM20	JOM22	JOM24	JOM26	JOM28	JOM30	JOM32
	0	0	0	0	0	0	0	0	0	0	0	0

JOMINY SAMPLE TYPE ENGLISH = R JOMINY LAB = 0358-01  
CHEM. DEVIATION EXT.-GREEN = N/R  
45 INCLUSION LAB = 0358-02

Cleanliness	ASTM-E45 Method A				
	A	B	C	D	
	Thin	1.0	0.5	0.0	0.5
	Heavy	0.0	0.0	0.0	0.5

### Test Results of Rolling Lot # 332536

CHEM. DEVIATION EXT.-GREEN = N/R

Test Results of Processing Lot # 478616:						
	# of Tests	Min Value	Max Value	Mean Value		
TENSILE (KSI)	3	94.3	97.1	96.1		TENSILE LAB = 0358-02
REDUCTION OF AREA (%)	3	52	53	52		RA LAB = 0358-02
ROCKWELL B (HRBW)	3	92	95	93		R8 LAB = 0358-02
WIRE SIZE (Inches)	21	0.731	0.731	0.731		
WIRE OUT OF ROUND (Inches)	21	0.000	0.000	0.000		
CHEM. DEVIATION EXT.-PROCESSED = N/R						

Specifications: Meets customer specifications with any applicable Charter Steel exceptions for the following customer documents:  
Customer Document = UNYTITE Revision = 5 Dated = 8-MAY-2003

Charter Steel  
Saukville, WI, USA

Fax number: ( )

Rem: Load 1, Mail 0, Fax 0



Tim Leahy  
Manager of Quality Assurance  
02/21/2006

# TEST REPORT

**MITTAL**

REQ., JOB, CONTRACT NO.		PURCHASE ORDER NO. 32948	
V E N D O R MITTAL STEEL USA INDIANA HARBOR BAR PRODUCTS 3300 DICKEY ROAD EAST CHICAGO, INDIANA 46312	SHIPPER'S NO.	BILL OF LADING NO. 214862	
	REPORT PRINT DATE	01/23/2006	

TEST REPORT TO: <b>UNYTITE</b>	SHIP TO: <b>UNYTITE, INC</b>
<b>1 UNYTITE DR</b>	<b>ONE UNYTITE DRIVE</b>
<b>PERU IL 61354</b>	<b>PERU IL, 61354</b>

**CMS (REG TM) SQ HOT ROLLED ROUNDS SAE 1045 MOD /RMS-009 (03/09/01) 5 / FINE GRAIN/CWQ/RESTRICTED CHEMICAL REQ/RESTRICTED MAX INCIDENTAL ELEMENTS/MRR FOR SPEC SURF & CLEAN/SPECIAL STRAIGHTENED/EDDY CURRENT TESTED/**

**RND 1.000 IN X 24 FT 10 1/2 IN**

**HEAT: 590283 C : 0.43 Mn: 0.67 P : .010 S : .020 Si: 0.18  
Cu: .09 Ni: 0.15 Cr: 0.09 Mo: .05 Al: .023  
Cb: .001 V : .002 N : .008 Ti: .001**

**Ni+Cr = 0.24**

<b>MICROCLEANLINESS per</b>	<b>A (SULF)</b>	<b>B (ALUM)</b>	<b>C (SILI)</b>	<b>D (OXID)</b>
<b>ASTM E45 METHOD A</b>	<b>2.0T 0.0H</b>	<b>0.0T 0.0H</b>	<b>0.0T 0.0H</b>	<b>1.0T 0.0H</b>

**DECARBURIZATION: A.A.D. 0.006"**

**PART NUMBER: CSRBI045M1000**

**MATERIAL MEETS AUSTENITIC GRAIN SIZE REQUIREMENT OF 5 OR FINER  
MATERIAL IS 100% SMELT/MELT AND MANUFACTURED IN THE U.S.A.**

**PAMELA M COLON  
NOTARY PUBLIC STATE OF INDIANA  
LAKE COUNTY  
MY COMMISSION EXP. MAR. 23, 2007**

*P.M. Colon*

**NOTARY**

<p>Unless otherwise stated, the steel described herein was manufactured, inspected and tested in accordance with the requirements of the contract or purchase order and conform to those requirements. The steel is free of surface mercury contamination at the time of shipment based on present methods and detection equipment. No mercury, radium or alpha source materials were used in the production of this steel. This steel has not been welded nor repair welded. Heat analyses and test results marked with an asterisk (*) were reported by a Mittal Steel USA, Indiana Harbor Bar Products approved third party. The "*" sign at the beginning of any line indicates an amendment to that line from a previously issued report for the same heat/order. All tests were performed by Mittal Steel USA, Indiana Harbor Bar Products, in accordance with the following, unless otherwise specified: Chemistry per ASTM E415 &amp; E1019; Hardenability per ASTM A255 and SAE J406; Macrostructure per ASTM E381 &amp; E1180; Mechanical Properties per ASTM A370, E8 &amp; E23; Hardness per ASTM E10 &amp; E18; and SAE J417; Cleanliness per SAE J421; Microstructure/Microcleanliness per ASTM E3, E45, E112 &amp; E1077, J419 &amp; J422, and JIS G0555; NDT per ASNT-TC-1A, Rounding per ASTM E29. Tested per most recent standard, unless otherwise noted. We hereby certify that the heat and/or test results in this report are applicable only to the items described herein, and are correct as contained in the records of the Company. This document shall not be reproduced except in full.</p>	<p>The management system governing the manufacture of this product is ISO/TS 16949:2002 certified, Certificate No. 38325; ISO 14001:1996 certified, Certificate No. 36274 and AZLA accredited in the fields of: Chemical, Mechanical and Environmental Testing - Certificate Nos. 111.01, 111.02 and 111.03</p> <p><i>Kevin R. Oberambt</i> Kevin R. Oberambt Manager - Quality Department</p>
--	--





640 Lavoy Road  
Erie, MI 48133  
Phone: 734/848-2915 Fax: 734/848-8734

*B7395*  
**CERTIFICATE  
OF  
ANALYSIS**

CUSTOMER ORDER NO: 13478	CERTIFICATION No: 2 -202997	SHIPPER NO: 2 -202997	CERTIFIED DATE: 10/04/05
CUSTOMER PART No: P1580H00	DH	SIZE: .1220 x 5.7000 x COIL	
CUSTOMER:  PRESTIGE STAMPING INC. **  P O BOX 1086  WARREN MI 480901086		GRADE: 1035	COATING SPECIFICATION: MELTED AND MANUFACTURED IN THE U.S.A.

ATTENTION:

All units of measurement for chemistry are in weight percent.

COIL NO.	HEAT NUMBER	CHEMISTRY AND MECHANICAL PROPERTIES
EU5301	4133370	C = 0.360 MN= 0.740 P = 0.011 S = 0.003 SI= 0.090 AL= 0.053
COMMENT: * MILL CERTIFICATION WITH LOAD *		

**RECEIVED**

OCT 05 2005

*JA*

THE ABOVE MECHANICAL AND CHEMICAL ANALYSES WERE SUPPLIED  
BY THE PRODUCING MILL OR TESTED ON OUR OWN EQUIPMENT.  
Form No. FQC 001 Rev. 1

*Carl Lerner*  
Heidman Steel Products, Inc.

# HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17585

Invoice No. B7010701

Invoice Date 01/17/07

Sales Order K09478

Cert No Inv Line No Item No

Quantity Lot No

Assembly No Haydon PO

31083 80000 PTU075300

10 JH961A

Heat 452770

A47284

# INSPECTION CERTIFICATE

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



JH961A

SET LOT NO. \_\_\_\_\_

Specification	Quantity
ASTM F1852 Type 1	13,004 PCS.
ASTM A563 Grade DH	
ASTM F436 Type 1	

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

JH961

Date: Jan. 04, '07

BOLT LOT NO. \_\_\_\_\_

Mechanical Property of Full Size Bolts	Heat Treatment	IDENTIFICATION	Chemical Composition %											
			C	Si	Mn	P	S	Cu	Ni	Cr	Mo	B		
<b>Tensile Strength</b>	1580		30	15	60	40	79	7	9	7	5	6	2	27
Load (lbf) Min. 40100 Max. 48900			52	30	Max. 40	Max. 50	Max. 40	Max. 50	Max. 40	Max. 50	Max. 40	Max. 50	Max. 40	Max. 50
Position of fracture (Length Method)	890	Heat No. 452770												
HRC	890													
Part of Screw +/- 0.0005 in.	890													
Part of Screw	890													
ALL PASS	890													
32.1	890													

NUT LOT NO. JK781

Mechanical Property of Full Size Bolts	Heat Treatment	IDENTIFICATION	Chemical Composition %										
			C	Si	Mn	P	S	Cu	Ni	Cr			
<b>Hardness After 24 hr x 1000° F HRB</b>	1562		20	-	60	40	50	27	-	-	-	-	20
Min. 24-38 HRB 89			55	-	Max. 40	Max. 50	Max. 50	Max. 50	Max. 50	Max. 50	Max. 50	Max. 50	Max. 50
Proof Load (Lbf)	1202	Heat No. M630021											
58450	1202												
ALL PASS	1202												
29.0	1202												

WASHER LOT NO. WB8949

Mechanical Property of Full Size Bolts	Heat Treatment	IDENTIFICATION	Chemical Composition %										
			C	Si	Mn	P	S	Cu	Ni	Cr			
<b>Hardness (HRC)</b>	18		-	-	-	-	-	-	-	-	-	-	-
Spec. 38-45 41.9			43	-	-	-	-	-	-	-	-	-	-
Proof Load (Lbf)	76	Heat No. B17013											
58450	76												
ALL PASS	76												
29.0	76												

Material used for the bolt, nut and washer were melted & manufactured in the USA. The product was manufactured in the USA to ASTM specifications. The bolt and nut are manufactured by Unyrite. We hereby certify that the material described has been manufactured and inspected satisfactory with requirement of the above specification.

Chief of Quality Assurance Section

Thread Accuracy (Bolt & Nut)	Thread Accuracy
Bolt	ASME B1.1 Class 2A
Nut	ANSI B1.1 Class 2B

REMARKS: *JEAN MARGHERIO*  
OFFICIAL SEAL  
JEAN MARGHERIO  
NOTARY PUBLIC - STATE OF ILLINOIS  
MY COMMISSION EXPIRES: 10/18/09  
01-05-07

LOAD



# CHARTER STEEL

## CHARTER STEEL TEST REPORT Reverse Has Text And Codes

A Division of  
Charter Manufacturing Company, Inc.

1658 Cold Springs Road  
Saukville, Wisconsin 53080

(262) 268-2400

1-800-437-8789

FAX (262) 268-2570

UNYTITE, INC.  
ONE UNYTITE DRIVE  
PERU, IL 61354-  
Attn: ATTEN: JEAN MARGHERIO

Cust. P.O.	29646
Cust. Part#	C10B30SCO.732D
Charter Sales Order	177723
Heat #	452770
Ship Lot #	502836
Grade#	10B30 M SK FG RHQ
Process	DD
Finish Size	0.732

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed below and on the reverse side, and that it satisfies those requirements.

### Test Results of Heat Lot# 452770

Lab Code: 7388

Chemistry	C	MN	P	S	SI	NI	CR	MO	CU	SN	V
Wt%	0.32	0.79	0.007	0.009	0.280	0.05	0.06	0.02	0.07	0.005	0.001

	AL	N	B	TI	NB
	0.023	0.0060	0.0027	0.021	0.001

Jominy (HRC)	JOM01	JOM02	JOM03	JOM04	JOM05	JOM06	JOM07	JOM08	JOM09	JOM10	JOM11	JOM12
	53	52	51	45	29	23	22	22	21	20	0	0
	JOM13	JOM14	JOM15	JOM16	JOM18	JOM20	JOM22	JOM24	JOM26	JOM28	JOM30	JOM32
	0	0	0	0	0	0	0	0	0	0	0	0

JOMINY SAMPLE TYPE ENGLISH = R JOMINY LAB = 0358-01  
CHEM. DEVIATION EXT.-GREEN = N/R  
E45 INCLUSION LAB = 0358-02

Cleanliness	ASTM-E45 Method A			
	A	B	C	D
Thin	1.0	2.0	0.0	1.0
Heavy	0.0	0.0	0.0	0.5

### Test Results of Rolling Lot # 353986

QC DEVIATION EXT.-GREEN = N/R

### Test Results of Processing Lot # 502836

	# of Tests	Min Value	Max Value	Mean Value	
TENSILE (KSI)	3	95.1	97.0	96.3	TENSILE LAB = 0358-02
REDUCTION OF AREA (%)	3	41	48	44	RA LAB = 0358-02
ROCKWELL B (HRBW)	3	91	91	91	RB LAB = 0358-02
WIRE SIZE (Inches)	7	0.731	0.731	0.731	
WIRE OUT OF ROUND (Inches)	7	0.000	0.000	0.000	

QC DEVIATION EXT.-PROCESSED = N/R

Specifications: Meets customer specifications with any applicable Charter Steel exceptions for the following customer documents:  
Customer Document = UNYTITE Revision = 5 Dated = 8-MAY-2003

Additional Comments:

Charter Steel  
Saukville, WI, USA



*Tim Leahy*  
Tim Leahy  
Manager of Quality Assurance  
12/05/2006

Fax number: ( ) - Rem: Load1, Mail0, Fax0

The following statements are applicable to the material described on the front of this Test Report:

1. Except as noted, the steel supplied for this order was melted, rolled and processed in the United States.
2. Mercury was not used during the manufacture of this product; nor was the steel contaminated with mercury during processing.
3. Unless directed by the customer, there are no welds in any of the coils produced for this order.
4. The laboratory that generated the analytical or test results can be identified by the following key:

Certificate Number	Lab Code	Laboratory		Address
0358-01	7388	<b>CSMD</b>	Charter Steel Melting Division	1658 Cold Springs Road, Saukville, WI 53080
0358-02	8171	<b>CSRD/CSPD</b>	Charter Steel Rolling/Processing Division	1658 Cold Springs Road, Saukville, WI 53080
0358-03	123633	<b>P4</b>	Charter Steel Ohio Processing Division	6255 US Highway 23, Risingsun, OH 43457
0358-04	125544	<b>CSC</b>	Charter Steel Cleveland	4300 E. 49 <sup>th</sup> St., Cuyahoga Heights, OH 44125-1004
*	*	--	Subcontracted test performed by laboratory not in Charter Steel system	

5. When run by a Charter Steel laboratory, the following tests were performed according to the latest revisions of the specifications listed below, as noted in the Charter Steel Laboratory Quality Manual:

Test	Possible Laboratory	Specification
Chemistry Analysis	CSMD	ASTM E415; ASTM E1019
Macroetch	CSMD	ASTM E381
Hardenability (Jominy)	CSMD	ASTM A255; JIS G0561
Grain Size	CSMD	ASTM E112
Tensile Test	CSRD/CSPD, P4, CSC	ASTM E8; ASTM A370
Rockwell Hardness	CSRD/CSPD, P4, CSC	ASTM E18; ASTM A370
Microstructure (spheroidization)	CSRD/CSPD, P4	ASTM A892
Cleanliness	CSRD/CSPD, CSC	ASTM E45

Charter Steel has been accredited to perform all of the above tests by the American Association for Laboratory Accreditation (A2LA). These accreditations expire 01/31/07.

All other test results associated with a Charter Steel laboratory that appear on the front of this report, if any, were performed according to documented procedures developed by Charter Steel and are not accredited by A2LA.

6. The test results on the front of this report are the true values measured on the samples taken from the production lot. They do not apply to any other sample.
7. This test report cannot be reproduced or distributed except in full without the written permission of Charter Steel. The primary customer whose name and address appear on the front of this form may reproduce this test report, subject to the following restrictions:
  - It may be distributed only to their customers
  - Both sides of all pages must be reproduced in full
8. This certification is given subject to the terms and conditions of sale provided in Charter Steel's acknowledgment (designated by our Purchase Order number) to the customer's purchase order. Both Purchase Order numbers appear on the front page of this Report.
9. Where the customer has provided a specification, the results on the front of this test report conform to that specification unless otherwise noted on this test report.



**GERDAU AMERISTEEL**

ST PAUL STEEL MILL  
1678 RED ROCK ROAD  
ST PAUL MN 55119 USA  
(651) 731-5600

Chemical and Physical Test Report  
MADE IN UNITED STATES

M-035488

PRODUCED IN: ST PAUL

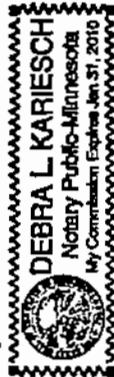
SHIP TO UNYTITE INC 1 UNYTITE DRIVE PERU, IL 61354	INVOICE TO UNYTITE INC 1 UNYTITE DRIVE PERU, IL 61354	SHIP DATE 12/21/08 CUST. ACCOUNT NO 70000042	SALES ORDER 6093415-01 CUST P.O. NUMBER P001070-01
---	--	---	---

SHAPE * SIZE	GRADE	SPECIFICATION	ELEMENTS																
R158Q	C1045M23F	C1045M23F .A575-90B(2000), A2B(A29M-05	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Nb	N	Sn	Al	Ti	Ca	Co
HEAT LD.	.45	.69	.012	.21	.26	.10	.20	.030	.032	.003	.0103	.001	.004	.00300	.00200	.010			
A630021																			

Mechanical Test: Rod R 38.97  
Grain Test: FINE  
Customer Requirements SOURCE: MINNESOTA BILLETS CASTING; STRAND CAST  
CUST ITEM NUMBER: B1045SC1.00

Quality Program Manual Rev. 1, Dtd 6/10/05

*Debra Kariesch*



This material, including the billets, was produced and manufactured in the United States of America

*Shaskay*

Bhaskar Yalamanchili  
Quality Director  
Gerdau Ameristeel

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

Mgr. Metallurg. Svcs.  
ST PAUL STEEL MILL

Seller warrants that all materials furnished shall comply with specifications subject to standard published manufacturing variations. NO OTHER WARRANTIES, EXPRESSED OR IMPLIED, ARE MADE BY THE SELLER, AND SPECIFICALLY EXCLUDED ARE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. In no event shall seller be liable for indirect, consequential or punitive damages arising out of or related to the materials furnished by seller. Any claim for damages for materials that do not conform to specifications must be made from buyer to seller immediately after delivery of same in order to allow the seller the opportunity to inspect the material in question.



**GERDAU AMERISTEEL**<sup>TM</sup>

**Lead and Mercury Content of Steel**

Lead and mercury are not purposefully introduced in the Gerdau Ameristeel steel manufacturing process, and are not present at levels that would require disclosure on Material Safety Data Sheets. To the best of our knowledge, no mercury is present in our steel products.

Sincerely,

Gerdau Ameristeel

A. James Turner  
Director, Environment & Quality



**Weld Repair of Finished Product**

We hereby certify that weld repair of finished products is not performed at Gerda Ameristeel.

Sincerely,

Gerda Ameristeel

A handwritten signature in black ink, appearing to read 'A. James Turner'.

A. James Turner  
Director, Environment & Quality



B 8949



640 Lavoy Road  
Erie, MI 48133  
Phone: 734/848-2915 Fax: 734/848-8734

# CERTIFICATE OF ANALYSIS

CUSTOMER ORDER NO: 14630	CERTIFICATION NO: 3 -219658	SHIPPER NO: 3 -219658	CERTIFIED DATE: 12/12/06
CUSTOMER PART NO: P1480H01	DH	SIZE: .1220 <sub>x</sub> 5.5000 <sub>x</sub>	COIL
CUSTOMER:  PRESTIGE STAMPING INC. **  P O BOX 1086  WARREN MI 480901086		GRADE: SAE J403 1040	
COATING SPECIFICATION: MELTED AND MANUFACTURED IN THE U.S.A.			

ATTENTION:

~~All units of measurement for chemistry are in weight percent.~~

COIL NO.	HEAT NUMBER	CHEMISTRY AND MECHANICAL PROPERTIES
KR0306	B17013	C = 0.430 MN= 0.760 P = 0.007 S = 0.001 SI= 0.180. AL= 0.023
KR0307	B17013	C = 0.430 MN= 0.760 P = 0.007 S = 0.001 SI= 0.180 AL= 0.023

DEC 13 2006

Time 8:00 AM - P.M.

THE ABOVE MECHANICAL AND CHEMICAL ANALYSES WERE SUPPLIED BY THE PRODUCING MILL OR TESTED ON OUR OWN EQUIPMENT.  
Form No. FQC 001 Rev. 2

Agent for Heidtman Steel Products, Inc.

HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17585

Invoice No. B7010701

Invoice Date 01/17/07

Sales Order K09478

Cert No Inv Line No Item No

Quantity

Lot No

Assembly No

Haydon PO

30988 90000 PTU075275

15 JH921A

Heat 450150

A47284

JH921A

# INSPECTION CERTIFICATE

SET LOT NO.

Specification	Size	Quantity
ASTM F1852 Type 1		
ASTM A563 Grade DH	3/4-10 UNC X 2-3/4	33,785 pcs.
ASTM F436 Type 1		



**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

**BOLT LOT NO.** JH921

Date: Dec. 12, '06

Mechanical Property of Full Size Bolts				Chemical Composition %												
Tensile Strength	Position of fracture	Hardness		Heat Treatment °F (°C)		IDENTIFICATION										
		Load (lbf)	Min.	Quench	Temper	C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100	Mo x 100	B x 10,000	
40100	Part of Screw	Max.	34 MAX		Min.	4325TC	30	15	60	40	50	7	9	5	1	27
51050	Part of Screw	ALL PASS	32.1	1580	869	Heat No.	31	25	82	7	7	9	4	5	1	27

**NUT LOT NO.** BD471

Mechanical Property of Full Size Nuts				Chemical Composition %												
Hardness After 24 hr x 1000° F HRB	Min.	HRB 89	Proof Load (Lbf)	Heat Treatment °F (°C)		IDENTIFICATION										
				Quench	Temper	C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100			
24-38	—	—	58450		Min.	U DH	20	—	60	40	50	30	—	—	—	—
29.6	—	—	ALL PASS	1562	1211	Heat No.	44	20	68	10	23	9	13	—	—	—

**WASHER LOT NO.** WB8123

Mechanical Property of Full Size Washers				Chemical Composition %												
Hardness (HRC)	Min.	HRB 89	Proof Load (Lbf)	Heat Treatment °F (°C)		IDENTIFICATION										
				Quench	Temper	C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100			
36-45	—	—	58450		Min.	P	—	—	—	—	—	—	—	—	—	—
42.0	—	—	ALL PASS	1562	1211	Heat No.	35	7	66	7	4	—	—	—	—	—

Material used for the bolt, nut and washer were melted & manufactured in the USA. The product was manufactured in the USA to ASTM specifications. The bolt and nut are manufactured by Unytite. We hereby certify that the material described has been manufactured and inspected satisfactory with requirement of the above specification.

Thread Accuracy (Bolt & Nut)	REMARKS
Bolt ASME B1.1 Class 2A	OFFICIAL SEAL JEAN MARGHERIO NOTARY PUBLIC - STATE OF ILLINOIS MY COMMISSION EXPIRES 10/18/09 12-13-06
Nut ANSI B1.1 Class 2B	

**Fastener Tension**

Fastener Tension	Min.
Spec. (lbf)	29000
Mean / 6 sets.	37500
Standard Deviation	2730

Chief of Quality Assurance Section

LOAD


 CHARTER  
STEEL

# CHARTER STEEL

 A Division of  
Charter Manufacturing Company, Inc.

**CHARTER STEEL TEST REPORT**  
Reverse Has Text And Codes

 1658 Cold Springs Road  
Saukville, Wisconsin 53080

(262) 268-2400

1-800-437-8789

FAX (262) 268-2570

 UNYTITE, INC.  
ONE UNYTITE DRIVE  
PERU, IL 61354-  
Attn: ATTEN: JEAN MARGHERIO

Cust. P.O.	29646
Cust Part#	C10B30SC0.732D
Charter Sales Order	177723
Heat #	450150
Ship Lot #	502728
Grade#	10B30 M SK FG RHQ
Process	DD
Finish Size	0.732

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed below and on the reverse side, and that it satisfies those requirements.

## Test Results of Heat Lot# 450150

Lab Code: 7388

Chemistry	C	MN	P	S	SI	NI	CR	MO	CU	SN	V
Wt%	0.31	0.82	0.007	0.007	0.250	0.04	0.05	0.01	0.09	0.006	0.001
	AL	N	B	TI	NB						
	0.023	0.0060	0.0027	0.018	0.001						

Jominy (HRC)	JOM01	JOM02	JOM03	JOM04	JOM05	JOM06	JOM07	JOM08	JOM09	JOM10	JOM11	JOM12
	53	51	51	48	32	23	22	21	21	20	20	0
JOMINY	JOM13	JOM14	JOM15	JOM16	JOM18	JOM20	JOM22	JOM24	JOM26	JOM28	JOM30	JOM32
	0	0	0	0	0	0	0	0	0	0	0	0

 JOMINY SAMPLE TYPE ENGLISH = R JOMINY LAB = 0358-01  
 CHEM. DEVIATION EXT.-GREEN = N/R  
 E45 INCLUSION LAB = 0358-02

Cleanliness

ASTM-E45 Method A

	A	B	C	D
Thin	1.0	1.0	0.0	0.5
Heavy	0.0	0.0	0.0	0.0

## Test Results of Rolling Lot # 353989

QC DEVIATION EXT.-GREEN = N/R

## Test Results of Processing Lot # 502728

	# of Tests	Min Value	Max Value	Mean Value	
TENSILE (KSI)	3	94.7	96.5	95.7	TENSILE LAB = 0358-02
REDUCTION OF AREA (%)	3	51	53	52	RA LAB = 0358-02
ROCKWELL B (HRBW)	3	90	92	91	RB LAB = 0358-02
WIRE SIZE (Inches)	13	0.731	0.732	0.731	
WIRE OUT OF ROUND (Inches)	13	0.000	0.000	0.000	

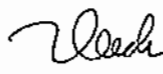
QC DEVIATION EXT.-PROCESSED = N/R

Specifications:

 Meets customer specifications with any applicable Charter Steel exceptions for the following customer documents:  
 Customer Document = UNYTITE Revision = 5 Dated = 8-MAY-2003

Additional Comments:

 Charter Steel  
Saukville, WI, USA

  
 Tim Leahy  
 Manager of Quality Assurance  
 12/04/2006

Fax number: ( ) - Rem: Load1, Mail0, Fax0

Page 1 of 1



ST PAUL STEEL MILL  
1678 RED ROCK ROAD  
ST PAUL MN 55119 USA  
(651) 731-5600

Chemical and Physical Test Report  
MADE IN UNITED STATES

M-034027

PRODUCED IN: ST PAUL

SHIP TO UNYTITE INC 1 UNYTITE DRIVE PERU, IL 61354	INVOICE TO UNYTITE INC 1 UNYTITE DRIVE PERU, IL 61354	SHIP DATE 11/18/08	CUST. ACCOUNT NO 70000042
---	--	-----------------------	------------------------------

SHAPE + SIZE	GRADE	SPECIFICATION	SALES ORDER	CUST P.O. NUMBER
R15BQ	C1045M23F	A576-906(2000),A29/A29M-05	6072000-03	P001012-03
HEAT I.D.	C	Mn P S Si Cu Ni Cr Mo V Nb N Sn Al Ti Ca Co		
S77130	.44	.68 .010 .030 .20 .23 .09 .13 .020 .027 .001 .0053 .022 .002 .00280 .00220 .009		

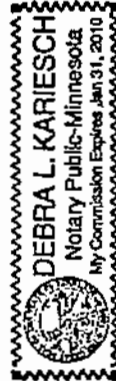
Mechanical Test: Red R 38.5 Std Dev'd Idl Diam: 1.319  
Cleanliness Test

FG(S-9), ROLL LOT M627506, QUALITY PROGRAM MANUAL REV. 1 DTD 6/10/05  
Fine Grain Size Unkta 5.0

J1	J2	J3	J4	J5	J6	J7	J8	J9	J10	J12	J14	J16	J18	J20	J24	J28	J32
58	54	46	34	28.2	25	24	23	22	21	19	18	18	17	16	16	14	14

Customer Requirements SOURCE: MINNESOTA BILLETS CASTING: STRAND CAST  
CUST ITEM NUMBER: B1045SC1.0000

*Debra Kariesch*



This material, including the billets, was produced and manufactured in the United States of America

*Shackley*

Bhaskar Yalamanchili  
Quality Director  
Gerdau Ameristeel

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

Mgr. Metallurg. Svcs.  
ST PAUL STEEL MILL

Seller warrants that all material furnished shall comply with specifications subject to standard published manufacturing variations. NO OTHER WARRANTIES, EXPRESSED OR IMPLIED, ARE MADE BY THE SELLER, AND SPECIFICALLY EXCLUDED ARE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. In no event shall seller be liable for indirect, consequential or punitive damages arising out of or related to the materials furnished by seller. Any claim for damages for materials that do not conform to specifications must be made from buyer to seller immediately after delivery of same in order to allow the seller the opportunity to inspect the material in question.



**GERDAU AMERISTEEL™**

**Lead and Mercury Content of Steel**

Lead and mercury are not purposefully introduced in the Gerdau Ameristeel steel manufacturing process, and are not present at levels that would require disclosure on Material Safety Data Sheets. To the best of our knowledge, no mercury is present in our steel products.

Sincerely,

Gerdau Ameristeel

A. James Turner  
Director, Environment & Quality



**GERDAU AMERISTEEL™**

**Weld Repair of Finished Product**

We hereby certify that weld repair of finished products is not performed at Gerda Ameristeel.

Sincerely,

Gerda Ameristeel

A. James Turner  
Director, Environment & Quality



640 Lavoy Road  
 Erie, MI 48133  
 Phone: 734/848-2915 Fax: 734/848-8734

LOT  
 B 8123

**CERTIFICATE  
 OF  
 ANALYSIS**

CUSTOMER ORDER NO: 14080	CERTIFICATION NO: 3 -214327	SHIPPER NO: 3 -214327	CERTIFIED DATE: 04/06/06
CUSTOMER PART NO: P1580H00	RF	SIZE: .1220 <sub>x</sub> 5.7000 <sub>x</sub>	COIL

CUSTOMER:

PRESTIGE STAMPING INC. \*\*

P O BOX 1086

WARREN

MI 4809010116

GRADE:  
SAE J403 1035

COILING SPECIFICATION:  
MELTED AND MANUFACTURED IN THE  
U.S.A.

ATTENTION:

~~All units of measurement for chemistry are in weight percent.~~

COIL NO.	HEAT NUMBER	CHEMISTRY AND MECHANICAL PROPERTIES
GK2302	9402246	C = 0.350 MN= 0.660 P = 0.007 S = 0.004 SI= 0.070 AN= 0.045

**RECEIVED**

APR 10 2006

*C.D.*

THE ABOVE MECHANICAL AND CHEMICAL ANALYSES WERE SUPPLIED  
 BY THE PRODUCING MILL OR TESTED ON OUR OWN EQUIPMENT.  
 Form No. FQC 001 Rev. 2

Agent for Heidman Steel Products, Inc.



HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17585

Invoice No. B7010701

Invoice Date 01/17/07

Sales Order K09478

Cert No Inv Line No Item No

Quantity Lot No

Heat

Haydon PO

31109 100000 PTU075250

140 JH871A

452770

Assembly No

A47284

# INSPECTION CERTIFICATE

**UNYTITE, INC.**

One Unytite Drive  
Peru, Illinois 61354

815-224-2221 — FAX # 815-224-3434



JH871A

SET LOT NO.

Specification	Size	Quantity
ASTM F1852 Type 1	3/4-10 UNC X 2-1/2	33,775 pcs.
ASTM A563 Grade DH		
ASTM F436 Type 1		

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

**BOLT LOT NO.** JH871

Date: Dec. 27, '06

Mechanical Property of Full Size Bolts				Chemical Composition %											
				Tensile Strength	Proof Load (Lbf)	Hardness	Heat Treatment	IDENTIFICATION	C	Si	Mn	P	S	Cu	Ni
Load (lbf)	28200	28200	HRC	Quench		x 100	x 100	x 100	x 1000	x 1000	x 100	x 100	x 100	x 100	x 10,000
Position of fracture				Temper		Heat No.	30	15	60	Max.	Max.				
Min.				Min.		52	30	60	40	50					
Part of Screw			34 MAX												
Part of Screw	ALL PASS	31.9		1580		32	28	79	7	9	7	5	6	2	27

JJ581

**NUT LOT NO.**

Mechanical Property of Full Size Nuts				Chemical Composition %									
				Hardness After 24 hr x 1000° F HRB	Proof Load (Lbf)	Heat Treatment	IDENTIFICATION	C	Si	Mn	P	S	Cu
Min.				x 100	x 100	x 1000	x 1000	x 100	x 1000	x 100	x 100	x 100	x 100
HRB 89	58450			Heat No.	20		60	Max.	Max.	Max.			
Spec.	24-38					55	40	50	40	50			
Mean/5 pcs	28.7	1562	M22536		45	24	80	28	18	8			12

**WASHER LOT NO.** WB8949

Mechanical Property of Full Size Washers				Chemical Composition %									
				Hardness (HRC)	Proof Load (Lbf)	Heat Treatment	IDENTIFICATION	C	Si	Mn	P	S	Cu
Min.				x 100	x 100	x 1000	x 1000	x 100	x 1000	x 100	x 100	x 100	x 100
HRB 89	58450			Heat No.				Max.	Max.	Max.			
Spec.	38-45					43	18	76	7	1			
Mean/5 Pcs	41.9	1562	B17013		45	24	80	28	18	8		12	

Material used for the bolt, nut and washer were melted & manufactured in the USA. The product was manufactured in the USA to ASTM specifications. The bolt and nut are manufactured by Unytite. We hereby certify that the material described has been manufactured and inspected satisfactory with requirement of the above specification.

Chief of Quality Assurance Section

Thread Accuracy (Bolt & Nut)	
Bolt	ASME B1.1 Class 2A
Nut	ANSI B1.1 Class 2B

Fastener Tension	
Spec. (lbf)	Min. 29000
Mean / 6 sets.	36634
Standard Deviation	1557

**REMARKS:**  
 OFFICIAL SEAL  
 JEAN MARGHERIO  
 PUBLIC - STATE OF ILLINOIS  
 MY COMMISSION EXPIRES 10/18/09

B 8949



640 Lavoy Road  
Erie, MI 48133  
Phone: 734/848-2915 Fax: 734/848-8734

# CERTIFICATE OF ANALYSIS

CUSTOMER ORDER NO: 14630	CERTIFICATION NO: 3 -219658	SHIPPER NO: 3 -219658	CERTIFIED DATE: 12/12/06
CUSTOMER PART NO: P1480H01	DH	SIZE: .1220 <sub>x</sub> 5.5000 <sub>x</sub>	COIL
CUSTOMER:  PRESTIGE STAMPING INC. **  P O BOX 1086  WARREN MI 480901086		GRADE: SAE J403 1040	
COMING SPECIFICATION MELTED AND MANUFACTURED IN THE U.S.A.			

ATTENTION:

~~All units of measurement for chemistry are in weight percent.~~

COIL NO.	HEAT NUMBER	CHEMISTRY AND MECHANICAL PROPERTIES
KR0306	B17013	C = 0.430 MN= 0.760 P = 0.007 S = 0.001 SI= 0.180. AL= 0.023
KR0307	B17013	C = 0.430 MN= 0.760 P = 0.007 S = 0.001 SI= 0.180 AL= 0.023

DEC 13 2006

Time 8:00 AM PM

THE ABOVE MECHANICAL AND CHEMICAL ANALYSES WERE SUPPLIED  
BY THE PRODUCING MILL OR TESTED ON OUR OWN EQUIPMENT.  
Form No. FQC 001 Rev. 2

*[Handwritten Signature]*

Agent for Holdtman Steel Products, Inc.

LOAD



# CHARTER STEEL

## CHARTER STEEL TEST REPORT Reverse Has Text And Codes

A Division of  
Charter Manufacturing Company, Inc.

1658 Cold Springs Road  
Saukville, Wisconsin 53080  
(262) 268-2400  
1-800-437-8789  
FAX (262) 268-2570

UNYTITE, INC.  
ONE UNYTITE DRIVE  
PERU, IL 61354-  
Attn: ATTEN: JEAN MARGHERIO

Cust. P.O.	29646
Cust Part#	C10B30SCO.732D
Charter Sales Order	177723
Heat #	452770
Ship Lot #	502836
Grade#	10B30 M SK FG RHQ
Process	DD
Finish Size	0.732

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed below and on the reverse side, and that it satisfies those requirements.

### Test Results of Heat Lot# 452770

Lab Code: 7388

Chemistry	C	MN	P	S	SI	NI	CR	MO	CU	SN	V
Wt%	0.32	0.79	0.007	0.009	0.280	0.05	0.06	0.02	0.07	0.005	0.001

AL	N	B	TI	NB
0.023	0.0060	0.0027	0.021	0.001

Jominy (HRC)	JOM01	JOM02	JOM03	JOM04	JOM05	JOM06	JOM07	JOM08	JOM09	JOM10	JOM11	JOM12
	53	52	51	45	29	23	22	22	21	20	0	0
	JOM13	JOM14	JOM15	JOM16	JOM18	JOM20	JOM22	JOM24	JOM26	JOM28	JOM30	JOM32
	0	0	0	0	0	0	0	0	0	0	0	0

JOMINY SAMPLE TYPE ENGLISH = R JOMINY LAB = 0358-01  
CHEM. DEVIATION EXT.-GREEN = N/R  
E45 INCLUSION LAB = 0358-02

Cleanliness	ASTM-E45 Method A			
	A	B	C	D
Thin	1.0	2.0	0.0	1.0
Heavy	0.0	0.0	0.0	0.5

### Test Results of Rolling Lot # 353986

QC DEVIATION EXT.-GREEN = N/R

### Test Results of Processing Lot # 502836

	# of Tests	Min Value	Max Value	Mean Value	
TENSILE (KSI)	3	95.1	97.0	96.3	TENSILE LAB = 0358-02
REDUCTION OF AREA (%)	3	41	48	44	RA LAB = 0358-02
ROCKWELL B (HRBW)	3	91	91	91	RB LAB = 0358-02
WIRE SIZE (Inches)	7	0.731	0.731	0.731	
WIRE OUT OF ROUND (Inches)	7	0.000	0.000	0.000	
QC DEVIATION EXT.-PROCESSED = N/R					

Specifications: Meets customer specifications with any applicable Charter Steel exceptions for the following customer documents:  
Customer Document = UNYTITE Revision = 5 Dated = 8-MAY-2003

Additional Comments:

Charter Steel  
Saukville, WI, USA



Fax number: ( ) - Rem: Load1,Mail0,Fax0

Tim Leahy  
Manager of Quality Assurance  
12/05/2006

The following statements are applicable to the material described on the front of this Test Report:

1. Except as noted, the steel supplied for this order was melted, rolled and processed in the United States.
2. Mercury was not used during the manufacture of this product; nor was the steel contaminated with mercury during processing.
3. Unless directed by the customer, there are no welds in any of the coils produced for this order.
4. The laboratory that generated the analytical or test results can be identified by the following key:

Certificate Number	Lab Code	Laboratory		Address
0358-01	7388	<b>CSMD</b>	Charter Steel Melting Division	1658 Cold Springs Road, Saukville, WI 53080
0358-02	8171	<b>CSR/D/ CSPD</b>	Charter Steel Rolling/ Processing Division	1658 Cold Springs Road, Saukville, WI 53080
0358-03	123633	<b>P4</b>	Charter Steel Ohio Processing Division	6255 US Highway 23, Risingsun, OH 43457
0358-04	125544	<b>CSC</b>	Charter Steel Cleveland	4300 E. 49 <sup>th</sup> St., Cuyahoga Heights, OH 44125-1004
*	*	--	Subcontracted test performed by laboratory not in Charter Steel system	

5. When run by a Charter Steel laboratory, the following tests were performed according to the latest revisions of the specifications listed below, as noted in the Charter Steel Laboratory Quality Manual:

Test	Possible Laboratory	Specification
Chemistry Analysis	CSMD	ASTM E415; ASTM E1019
Macroetch	CSMD	ASTM E381
Hardenability (Jominy)	CSMD	ASTM A255; JIS G0561
Grain Size	CSMD	ASTM E112
Tensile Test	CSR/D/CSPD, P4, CSC	ASTM E8; ASTM A370
Rockwell Hardness	CSR/D/CSPD, P4, CSC	ASTM E18; ASTM A370
Microstructure (spheroidization)	CSR/D/CSPD, P4	ASTM A892
Cleanliness	CSR/D/CSPD, CSC	ASTM E45

Charter Steel has been accredited to perform all of the above tests by the American Association for Laboratory Accreditation (A2LA). These accreditations expire 01/31/07.

All other test results associated with a Charter Steel laboratory that appear on the front of this report, if any, were performed according to documented procedures developed by Charter Steel and are not accredited by A2LA.

6. The test results on the front of this report are the true values measured on the samples taken from the production lot. They do not apply to any other sample.
7. This test report cannot be reproduced or distributed except in full without the written permission of Charter Steel. The primary customer whose name and address appear on the front of this form may reproduce this test report, subject to the following restrictions:
  - It may be distributed only to their customers
  - Both sides of all pages must be reproduced in full
8. This certification is given subject to the terms and conditions of sale provided in Charter Steel's acknowledgment (designated by our Purchase Order number) to the customer's purchase order. Both Purchase Order numbers appear on the front page of this Report.
9. Where the customer has provided a specification, the results on the front of this test report conform to that specification unless otherwise noted on this test report.



**CERTIFIED MATERIAL TEST REPORT**

<b>CUSTOMER ORDER NUMBER</b> P001168	<b>CUSTOMER PART NUMBER</b> B1045SC10000	<b>HEAT NUMBER</b> M22536	<b>WORK ORDER NUMBER</b> 203498 101	<b>DATE</b> 12/01/06
---	---	------------------------------	--	-------------------------

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

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

**ORDERED**

<b>GRADE</b> 1045	<b>SIZE</b> 1" RND	<b>LENGTH</b> 24' 10 1/2"
----------------------	-----------------------	------------------------------

**CUSTOMER SPECIFICATIONS**  
SAE 1045; ASTM E381-91

**CHEMICAL ANALYSIS - (BAR AVERAGE)**

C	Mn	P	S	Si	Ni	Cr	Mo	Cu	Sn	Al
0.45	0.80	0.007	0.028	0.24	0.08	0.12	0.04	0.18	0.008	0.003
V	Nb									
0.055	0.002									

**GRAIN SIZE** SPECIFICATION ASTM E112 FINE GRAIN 5-8

**MACROCLEANLINESS** SPECIFICATION ASTM E381

PLATE I PLATE II

<b>AVERAGE</b>	<b>S</b>	<b>R</b>	<b>C</b>	<b>NONE</b>
	1	1	1	

**DECARB** SPECIFICATION ASTM E1077

**F** TOTAL= 0.004

PAGE 1

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

MACSTEEL  
3000 East Front Street  
Monroe, MI 48161

MACSTEEL-JACKSON   
MACSTEEL-FT SMITH   
MACSTEEL-MONROE

*Chris Lester*  
Quality Assurance Representative

**CERTIFIED MATERIAL TEST REPORT**

<b>CUSTOMER ORDER NUMBER</b> P001168	<b>CUSTOMER PART NUMBER</b> B1045SC10000	<b>HEAT NUMBER</b> M22536	<b>WORK ORDER NUMBER</b> 203498 101	<b>DATE</b> 12/01/06
---	---	------------------------------	--	-------------------------

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

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

**ORDERED**

<b>GRADE</b> 1045	<b>SIZE</b> 1" RND	<b>LENGTH</b> 24' 10 1/2"
----------------------	-----------------------	------------------------------

**CUSTOMER SPECIFICATIONS**  
SAE 1045; ASTM E381-91

**REDUCTION RATIO**

RATIO= 45.8 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. \*\*

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

MACSTEEL  
3000 East Front Street  
Monroe, MI 48161

MACSTEEL-JACKSON   
MACSTEEL-FT SMITH   
MACSTEEL-MONROE

  
Quality Assurance Representative

# HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17585

Invoice No. B7010701

Invoice Date 01/17/07

Sales Order K09478

Cert No Inv Line No Item No

Quantity Lot No

Assembly No Haydon PO

30928 110000 PTU075225

250 JH781A

Heat 450160

A47782



JH781A

# INSPECTION CERTIFICATE

**UNYTITE, INC.**

One Unytite Drive  
Peru, Illinois 61354

815-224-2221 — FAX # 815-224-3434



SET LOT NO. \_\_\_\_\_

Specification	Size	Quantity
ASTM F1852 Type 1	3/4-10 UNC X 2-1/4	36,131 pcs.
ASTM A563 Grade DH		
ASTM F436 Type 1		

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

BOLT LOT NO. JH781

Date: Dec. 14, '06

Mechanical Property of Full Size Bolts	Chemical Composition %																			
	Tensile Strength		Proof Load		Hardness		Heat Treatment		IDENTIFICATION		C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100	Mo x 100	B x 10,000
	Load (lbf)	Min.	Max.	Part of Screw	Part of Screw	ALL PASS	31.5	1560	890	Quench										
Spec.	40100	40100	40100	40100	40100	34 MAX	800	800	450160	450160	30	15	60	40	50	-	-	-	-	-
Average	49575	49575	49575	49575	49575	31.5	890	890	450160	450160	31	27	84	7	8	10	5	1	28	

NUT LOT NO. BD453

Mechanical Property of Full Size Bolts	Chemical Composition %																		
	Tensile Strength		Proof Load		Hardness		Heat Treatment		IDENTIFICATION		C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100	
	Load (lbf)	Min.	Max.	Part of Screw	Part of Screw	ALL PASS	1202	1562	Quench	Temper									Min.
Spec.	24-38	24-38	24-38	24-38	24-38	HRB 89	800	800	450160	450160	20	-	60	40	50	-	-	-	-
Mean/5pcs	28.5	28.5	28.5	28.5	28.5	—	1202	1562	S77127	S77127	45	21	69	21	29	21	11	15	

WASHER LOT NO. WB8754

Mechanical Property of Full Size Bolts	Chemical Composition %																	
	Tensile Strength		Proof Load		Hardness		Heat Treatment		IDENTIFICATION		C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100
	Load (lbf)	Min.	Max.	Part of Screw	Part of Screw	ALL PASS	72	8	Quench	Temper								
Spec.	38-45	38-45	38-45	38-45	38-45	HRB 89	800	800	9403080	9403080	-	-	-	40	50	-	-	-
Mean/5 Pcs.	42.5	42.5	42.5	42.5	42.5	—	72	8	9403080	9403080	37	7	72	8	4	-	-	

Material used for the bolt, nut and washer were melted & manufactured in the USA. The product was manufactured in the USA to ASTM specifications. The bolt and nut are manufactured by Unytite. We hereby certify that the material described has been manufactured and inspected satisfactory with requirement of the above specification.

Thread Accuracy (Bolt & Nut)
Bolt: ASME B1.1 Class 2A
Nut: ANSI B1.1 Class 2B

Fastener Tension	
Spec. (lbf)	29000
Mean / 6 sets.	35426
Standard Deviation	1158

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

Chief of Quality Assurance Section



# CHARTER STEEL

A Division of  
Charter Manufacturing Company, Inc.

LOAD

## CHARTER STEEL TEST REPORT Reverse Has Text And Codes

1658 Cold Springs Road  
Saukville, Wisconsin 53080  
(262) 268-2400  
1-800-437-8789  
FAX (262) 268-2570

UNYTITE, INC.  
ONE UNYTITE DRIVE  
PERU, IL 61354-  
Attn: ATTN: JEAN MARGHERIO

Cust. P.O.	29646
Cust. Part#	C10B30SCO.732D
Charter Sales Order	177723
Heat #	450160
Ship Lot #	501644
Grade#	10B30 M SK FG RHQ
Process	DD
Finish Size	0.732

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed below and on the reverse side, and that it satisfies those requirements.

### Test Results of Heat Lot# 450160

Lab Code: 7388

Chemistry	C	MN	P	S	SI	NI	CR	MO	CU	SN	V
Wt%	0.31	0.84	0.007	0.008	0.270	0.05	0.05	0.01	0.10	0.007	0.001
	AL	N	B	TI	NB						
	0.023	0.0060	0.0028	0.021	0.001						

Jominy (HRC)	JOM01	JOM02	JOM03	JOM04	JOM05	JOM06	JOM07	JOM08	JOM09	JOM10	JOM11	JOM12
	53	52	51	49	36	25	22	22	21	21	20	20
	JOM13	JOM14	JOM15	JOM16	JOM18	JOM20	JOM22	JOM24	JOM26	JOM28	JOM30	JOM32
	0	0	0	0	0	0	0	0	0	0	0	0

JOMINY SAMPLE TYPE ENGLISH = R JOMINY LAB = 0358-01  
CHEM. DEVIATION EXT.-GREEN = N/R  
E45 INCLUSION LAB = 0358-02

Cleanliness	ASTM-E45 Method A				
	A	B	C	D	
	Thin	0.5	1.5	0.0	0.5
	Heavy	0.0	0.0	0.0	0.0

### Test Results of Rolling Lot # 352876

QC DEVIATION EXT.-GREEN = N/R

### Test Results of Processing Lot # 501644

	# of Tests	Min Value	Max Value	Mean Value	
TENSILE (KSI)	3	95.4	97.2	96.4	TENSILE LAB = 0358-02
REDUCTION OF AREA (%)	3	53	55	54	RA LAB = 0358-02
ROCKWELL B (HRBW)	3	88	88	88	RB LAB = 0358-02
WIRE SIZE (Inches)	41	0.731	0.732	0.731	
WIRE OUT OF ROUND (Inches)	41	0.000	0.000	0.000	
QC DEVIATION EXT.-PROCESSED = N/R					

Specifications: Meets customer specifications with any applicable Charter Steel exceptions for the following customer documents:  
Customer Document = UNYTITE Revision = 5 Dated = 8-MAY-2003

Additional Comments:

Charter Steel  
Saukville, WI, USA



Tim Leahy  
Manager of Quality Assurance  
11/15/2006

Fax number: ( ) Rem: Load1,Mail0,Fax0

The following statements are applicable to the material described on the front of this Test Report:

1. Except as noted, the steel supplied for this order was melted, rolled and processed in the United States.
2. Mercury was not used during the manufacture of this product; nor was the steel contaminated with mercury during processing.
3. Unless directed by the customer, there are no welds in any of the coils produced for this order.
4. The laboratory that generated the analytical or test results can be identified by the following key:

Certificate Number	Lab Code	Laboratory		Address
0358-01	7388	<b>CSMD</b>	Charter Steel Melting Division	1658 Cold Springs Road, Saukville, WI 53080
0358-02	8171	<b>CSR/ CSPD</b>	Charter Steel Rolling/ Processing Division	1658 Cold Springs Road, Saukville, WI 53080
0358-03	123633	<b>P4</b>	Charter Steel Ohio Processing Division	6255 US Highway 23, Risingsun, OH 43457
0358-04	125544	<b>CSC</b>	Charter Steel Cleveland	4300 E. 49 <sup>th</sup> St., Cuyahoga Heights, OH 44125-1004
*	*	--	Subcontracted test performed by laboratory not in Charter Steel system	

5. When run by a Charter Steel laboratory, the following tests were performed according to the latest revisions of the specifications listed below, as noted in the Charter Steel Laboratory Quality Manual:

Test	Possible Laboratory	Specification
Chemistry Analysis	CSMD	ASTM E415; ASTM E1019
Macroetch	CSMD	ASTM E381
Hardenability (Jominy)	CSMD	ASTM A255; JIS G0561
Grain Size	CSMD	ASTM E112
Tensile Test	CSR/ CSPD, P4, CSC	ASTM E8; ASTM A370
Rockwell Hardness	CSR/ CSPD, P4, CSC	ASTM E18; ASTM A370
Microstructure (spheroidization)	CSR/ CSPD, P4	ASTM A892
Cleanliness	CSR/ CSPD, CSC	ASTM E45

Charter Steel has been accredited to perform all of the above tests by the American Association for Laboratory Accreditation (A2LA). These accreditations expire 01/31/07.

All other test results associated with a Charter Steel laboratory that appear on the front of this report, if any, were performed according to documented procedures developed by Charter Steel and are not accredited by A2LA.

6. The test results on the front of this report are the true values measured on the samples taken from the production lot. They do not apply to any other sample.
7. This test report cannot be reproduced or distributed except in full without the written permission of Charter Steel. The primary customer whose name and address appear on the front of this form may reproduce this test report, subject to the following restrictions:
  - It may be distributed only to their customers
  - Both sides of all pages must be reproduced in full
8. This certification is given subject to the terms and conditions of sale provided in Charter Steel's acknowledgment (designated by our Purchase Order number) to the customer's purchase order. Both Purchase Order numbers appear on the front page of this Report.
9. Where the customer has provided a specification, the results on the front of this test report conform to that specification unless otherwise noted on this test report.





ST PAUL STEEL MILL  
1878 RED ROCK ROAD  
ST PAUL MN 55119 USA  
(651) 731-5600

Chemical and Physical Test Report  
MADE IN UNITED STATES

M-033913

PRODUCED IN: ST PAUL

SHIP TO UNYTITE INC 1 UNYTITE DRIVE PERU, IL 61354	INVOICE TO UNYTITE INC 1 UNYTITE DRIVE PERU, IL 61354	SHIP DATE 11/14/06	CUST. ACCOUNT NO 70000042
---	--	-----------------------	------------------------------

SHAPE + SIZE	GRADE	SPECIFICATION	SALES ORDER	CUST P.O. NUMBER
R15BQ	C1045M23F	A576-908(2000), A29/A29M-05	6072006-02	P001012-02
HEAT I.D.	C	Mn P S Si Cu Ni Cr Mo V Nb N Sn Al Ti Ca Co		
S77127	.45 .69 .010 .029 .21 .21	.11 .15 .060 .024 .002 .0093 .018 .002 .00250 .00160 .010		

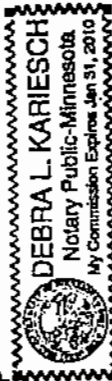
Mechanical Test: Red R 38.5 Std Dev=0 lcl Diam: 1.513  
Cleanliness Test

VENDOR HEAT S77127, ROLL LOT M627511, QUALITY PROGRAM MANUAL REV. 1, DTD 6/10/05, FG(S-8)

File No	Grain Size Units	J1	J2	J3	J4	J6	J7	J8	J9	J10	J12	J14	J16	J18	J20	J24	J28	J32
68	5.0	55	49	37	27	28	25	24	23	21	20	19	18	17	16	15	15	

Customer Requirements: SOURCE: MINNESOTA BILLETS CASTING: STRAND CAST  
CUST ITEM NUMBER: B1045SC1.0000

*Debra L. Kariesch*



This material, including the billets, was produced and manufactured in the United States of America

Bhaskar Yelamanchilli  
Quality Director  
Gerdau Ameristeel

*Bhaskar Yelamanchilli*

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

Mgr. Metallurg. Svcs.  
ST PAUL STEEL MILL

Seller warrants that all material furnished shall comply with specifications subject to standard published manufacturing variations. NO OTHER WARRANTIES, EXPRESSED OR IMPLIED, ARE MADE BY THE SELLER, AND SPECIFICALLY EXCLUDED ARE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. In no event shall seller be liable for indirect, consequential or punitive damages arising out of or related to the materials furnished by seller. Any claim for damages for materials that do not conform to specifications must be made from buyer to seller immediately after delivery of same in order to allow the seller the opportunity to inspect the material in question.



**GERDAU AMERISTEEL™**

**Lead and Mercury Content of Steel**

Lead and mercury are not purposefully introduced in the Gerdau Ameristeel steel manufacturing process, and are not present at levels that would require disclosure on Material Safety Data Sheets. To the best of our knowledge, no mercury is present in our steel products.

Sincerely,

Gerdau Ameristeel

A. James Turner  
Director, Environment & Quality



**GERDAU AMERISTEEL™**

**Weld Repair of Finished Product**

We hereby certify that weld repair of finished products is not performed at Gerda Ameristeel.

Sincerely,

Gerda Ameristeel

A. James Turner  
Director, Environment & Quality



640 Lavoy Road  
 Erie, MI 48133  
 Phone: 734/848-2915 Fax: 734/848-8734

B 8754

**CERTIFICATE  
 OF  
 ANALYSIS**

CUSTOMER ORDER NO: 14543	CERTIFICATION NO: 2-217419	SHIPPER NO: 2-217419	CERTIFIED DATE: 10/18/06
CUSTOMER PART NO: P1480H01	RF	SIZE: .1220 <sub>x</sub> 5.5000 <sub>x</sub> COIL	GRADE: SAE J403 1040
CUSTOMER:  PRESTIGE STAMPING INC. **  P O BOX 1086  WARREN MI 480901086		MATERIAL MANUFACTURED IN THE U.S.A.	

ATTENTION:

~~All units of measurement for chemistry are in weight percent.~~

COIL NO.	HEAT NUMBER	CHEMISTRY AND MECHANICAL PROPERTIES
KE7801	9403080	C = 0.370 MN= 0.720 P = 0.008 S = 0.004 SI= 0.070 AL= 0.047

**RECEIVED**

OCT 19 2006

Time           

*[Signature]*  
 Agent for Heidman Steel Products, Inc.

THE ABOVE MECHANICAL AND CHEMICAL ANALYSES WERE SUPPLIED  
 BY THE PRODUCING MILL OR TESTED ON OUR OWN EQUIPMENT.  
 Form No. FQC 001 Rev. 2

# HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17585

Invoice No. B7010701

Invoice Date 01/17/07

Sales Order K09478

Cert No Inv Line No Item No

Quantity Lot No

Assembly No Haydon PO

31103 120000 PTU075200

300 JM061A

Heat 454700

A47284



# INSPECTION CERTIFICATE

JM061A

**UNYTITE, INC.**

One Unytite Drive  
Peru, Illinois 61354

815-224-2221 — FAX # 815-224-3434



SET LOT NO.	Specification	Size	Quantity
	ASTM F1852 Type 1 ASTM A563 Grade DH ASTM F436 Type 1	3/4-10 UNC X 2	35,305 pcs.

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

**BOLT LOT NO.** JM061

Date: Jan. 10, '07

Mechanical Property of Full Size Bolts	Chemical Composition %																								
	Tensile Strength		Proof Load		Hardness		Heat Treatment		IDENTIFICATION																
	Load (lbf)	Min.	Position of fracture	lb. (Length Method)	HRC	Quench	Temper	Min.	Heat No.	Heat No.															
Spec.	40100	40100	Part of Screw	±0.0005 in.	34 MAX	-	800	800	15	30	30	15	30	30	52	50	40	50	76	9	9	6	10	3	23
Average	48975	48975	Part of Screw	ALL PASS	32.1	1580	900	900	26	26	31	26	26	454700	454700	454700	454700	454700	76	9	9	6	10	3	23

**NUT LOT NO.** JK751

Mechanical Property of Full Size Nuts	Chemical Composition %																							
	Tensile Strength		Proof Load		Hardness		Heat Treatment		IDENTIFICATION															
	Load (lbf)	Min.	Position of fracture	lb. (Length Method)	HRC	Quench	Temper	Min.	Heat No.	Heat No.														
Spec.	24-38	24-38	Part of Nut	58450	HRB 89	-	800	800	20	55	55	20	55	55	55	55	40	50	60	50	28	8	8	12
Mean/Spec.	28.5	28.5	Part of Nut	ALL PASS	—	1562	1202	M22536	45	24	80	45	24	80	45	24	7	28	18	18	28	8	8	12

**WASHER LOT NO.** WB8947

Mechanical Property of Full Size Washers	Chemical Composition %																							
	Tensile Strength		Proof Load		Hardness		Heat Treatment		IDENTIFICATION															
	Load (lbf)	Min.	Position of fracture	lb. (Length Method)	HRC	Quench	Temper	Min.	Heat No.	Heat No.														
Spec.	38-45	38-45	Part of Washer	—	—	-	-	-	36	40	82	36	40	13	13	13	40	50	40	50	2836	2836	2836	2836
Mean/5 Pcs.	42.0	42.0	Part of Washer	—	—	40	13	M22536	45	24	80	45	24	80	45	24	7	28	18	18	2836	2836	2836	2836

Material used for the bolt, nut and washer were melted & manufactured in the USA. The product was manufactured in the USA to ASTM specifications. The bolt and nut are manufactured by Unytite. We hereby certify that the material described has been manufactured and inspected satisfactory with requirement of the above specification.

Thread Accuracy (Bolt & Nut)	
Bolt	ASME B1.1 Class 2A
Nut	ANSI B1.1 Class 2B

**REMARKS:**  
 OFFICIAL SEAL  
 JEAN MARGHERIO  
 NOTARY PUBLIC - STATE OF ILLINOIS  
 MY COMMISSION EXPIRES: 10/18/09  
 01-11-07

Chief of Quality Assurance Section

LOAD



# CHARTER STEEL

## CHARTER STEEL TEST REPORT Reverse Has Text And Codes

A Division of  
Charter Manufacturing Company, Inc.

1658 Cold Springs Road  
Saukville, Wisconsin 53080  
(262) 268-2400  
1-800-437-8789  
FAX (262) 268-2570

UNYTITE, INC.  
ONE UNYTITE DRIVE  
PERU, IL 61354-  
Attn: ATTEN: JEAN MARGHERIO

Cust. P.O.	29646
Cust. Part#	C10B30SCO.732D
Charter Sales Order	177723
Heat #	454700
Ship Lot #	504138
Grade#	10B30 M SK FG RHQ
Process	DD
Finish Size	0.732

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed below and on the reverse side, and that it satisfies those requirements.

Test Results of Heat Lot# 454700

Lab Code: 7388

Chemistry	C	MN	P	S	SI	NI	CR	MO	CU	SN	V
Wt%	0.31	0.76	0.007	0.009	0.260	0.06	0.10	0.03	0.09	0.005	0.001
	AL	N	B	TI	NB						
	0.023	0.0060	0.0023	0.020	0.001						

Jominy (HRC)	JOM01	JOM02	JOM03	JOM04	JOM05	JOM06	JOM07	JOM08	JOM09	JOM10	JOM11	JOM12
	53	52	51	50	37	26	23	22	21	20	20	20
Jominy (HRC)	JOM13	JOM14	JOM15	JOM16	JOM18	JOM20	JOM22	JOM24	JOM26	JOM28	JOM30	JOM32
	0	0	0	0	0	0	0	0	0	0	0	0

JOMINY SAMPLE TYPE ENGLISH = R JOMINY LAB = 0358-01  
CHEM. DEVIATION EXT.-GREEN = N/R  
E45 INCLUSION LAB = 0358-02

Cleanliness	ASTM-E45 Method A			
	A	B	C	D
Thin	1.0	1.0	0.0	0.5
Heavy	0.0	0.0	0.0	0.5

Test Results of Rolling Lot # 355092

QC DEVIATION EXT.-GREEN = N/R

Test Results of Processing Lot # 504138

	# of Tests	Min Value	Max Value	Mean Value	
TENSILE (KSI)	3	95.6	96.5	96.2	TENSILE LAB = 0358-02
REDUCTION OF AREA (%)	3	51	53	52	RA LAB = 0358-02
ROCKWELL B (HRBW)	3	91	92	91	RB LAB = 0358-02
WIRE SIZE (Inches)	21	0.731	0.731	0.731	
WIRE OUT OF ROUND (Inches)	21	0.000	0.000	0.000	

Specifications: Meets customer specifications with any applicable Charter Steel exceptions for the following customer documents:  
Customer Document = UNYTITE Revision = 5 Dated = 8-MAY-2003

Additional Comments:

Charter Steel  
Saukville, WI, USA



*Tim Leahy*  
Tim Leahy  
Manager of Quality Assurance  
12/18/2006

Fax number: ( ) - Rem: Load1,Mail0,Fax0

The following statements are applicable to the material described on the front of this Test Report:

1. Except as noted, the steel supplied for this order was melted, rolled and processed in the United States.
2. Mercury was not used during the manufacture of this product; nor was the steel contaminated with mercury during processing.
3. Unless directed by the customer, there are no welds in any of the coils produced for this order.
4. The laboratory that generated the analytical or test results can be identified by the following key:

Certificate Number	Lab Code	Laboratory		Address
0358-01	7388	CSMD	Charter Steel Melting Division	1658 Cold Springs Road, Saukville, WI 53080
0358-02	8171	CSR/D/CSPD	Charter Steel Rolling/Processing Division	1658 Cold Springs Road, Saukville, WI 53080
0358-03	123633	P4	Charter Steel Ohio Processing Division	6255 US Highway 23, Risingsun, OH 43457
0358-04	125544	CSC	Charter Steel Cleveland	4300 E. 49 <sup>th</sup> St., Cuyahoga Heights, OH 44125-1004
*	*	-	Subcontracted test performed by laboratory not in Charter Steel system	

5. When run by a Charter Steel laboratory, the following tests were performed according to the latest revisions of the specifications listed below, as noted in the Charter Steel Laboratory Quality Manual:

Test	Possible Laboratory	Specification
Chemistry Analysis	CSMD	ASTM E415; ASTM E1019
Macroetch	CSMD	ASTM E381
Hardenability (Jominy)	CSMD	ASTM A255; JIS G0561
Grain Size	CSMD	ASTM E112
Tensile Test	CSR/D/CSPD, P4, CSC	ASTM E8; ASTM A370
Rockwell Hardness	CSR/D/CSPD, P4, CSC	ASTM E18; ASTM A370
Microstructure (spheroidization)	CSR/D/CSPD, P4	ASTM A892
Cleanliness	CSR/D/CSPD, CSC	ASTM E45

Charter Steel has been accredited to perform all of the above tests by the American Association for Laboratory Accreditation (A2LA). These accreditations expire 01/31/07.

All other test results associated with a Charter Steel laboratory that appear on the front of this report, if any, were performed according to documented procedures developed by Charter Steel and are not accredited by A2LA.

6. The test results on the front of this report are the true values measured on the samples taken from the production lot. They do not apply to any other sample.
7. This test report cannot be reproduced or distributed except in full without the written permission of Charter Steel. The primary customer whose name and address appear on the front of this form may reproduce this test report, subject to the following restrictions:
  - It may be distributed only to their customers
  - Both sides of all pages must be reproduced in full
8. This certification is given subject to the terms and conditions of sale provided in Charter Steel's acknowledgment (designated by our Purchase Order number) to the customer's purchase order. Both Purchase Order numbers appear on the front page of this Report.
9. Where the customer has provided a specification, the results on the front of this test report conform to that specification unless otherwise noted on this test report.



**CERTIFIED MATERIAL TEST REPORT**

<b>CUSTOMER ORDER NUMBER</b> P001168	<b>CUSTOMER PART NUMBER</b> B1045SC10000	<b>HEAT NUMBER</b> M22536	<b>WORK ORDER NUMBER</b> 203498 101	<b>DATE</b> 12/01/06
---	---	------------------------------	--	-------------------------

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

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

**ORDERED**

<b>GRADE</b> 1045	<b>SIZE</b> 1" RND	<b>LENGTH</b> 24' 10 1/2"
----------------------	-----------------------	------------------------------

**CUSTOMER SPECIFICATIONS**  
SAE 1045; ASTM E381-91

**CHEMICAL ANALYSIS - (BAR AVERAGE)**

C	Mn	P	S	Si	Ni	Cr	Mo	Cu	Sn	Al
0.45	0.80	0.007	0.028	0.24	0.08	0.12	0.04	0.18	0.008	0.003
V	Nb									
0.055	0.002									

**GRAIN SIZE** SPECIFICATION ASTM E112 FINE GRAIN 5-8

**MACROCLEANLINESS** SPECIFICATION ASTM E381

PLATE I

PLATE II

<b>AVERAGE</b>	<b>S</b>	<b>R</b>	<b>C</b>	<b>NONE</b>
	1	1	1	

**DECARB** SPECIFICATION ASTM E1077

**F** TOTAL= 0.004

PAGE 1

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

MACSTEEL  
3000 East Front Street  
Monroe, MI 48161

MACSTEEL-JACKSON   
MACSTEEL-FT SMITH   
MACSTEEL-MONROE

  
Quality Assurance Representative

**MacSteel**

ONE JACKSON SQUARE  
SUITE 500  
JACKSON, MICHIGAN 48201

**CERTIFIED MATERIAL TEST REPORT**

CUSTOMER ORDER NUMBER	CUSTOMER PART NUMBER	HEAT NUMBER	WORK ORDER NUMBER	DATE
P001168	B1045SC10000	M22536	203498 101	12/01/06

REPORT TO  
TRACO  
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" RND	24' 10 1/2"

**CUSTOMER SPECIFICATIONS**

SAE 1045; ASTM E381-91

**REDUCTION RATIO**

RATIO= 45.8 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  
3000 East Front Street  
Monroe, MI 48161

MACSTEEL-JACKSON   
MACSTEEL-FT SMITH   
MACSTEEL-MONROE

  
Quality Assurance Representative

Bill #: 323389

158947  
Cert #: 326049

# Kerry Steel, Inc.

31731 Northwestern Hwy - Suite 200 - Farmington Hills, MI 48334  
(248) 352-0000 - (248) 865-9059

## CERTIFICATION OF STEEL ANALYSIS

Sold To: Prestige Stamping, Inc.  
23513 Groesbeck Hwy  
P.O. Box 1086  
Warren, MI 48089

P/O #: 14715 REL01  
Part #: P1480HOO

Work Order #: 186712 S/O #: 183541  
Size: 0.1220 x 5.5000 x Coil  
Desc: Hot Roll Pickled & Oiled C1040  
DOMESTIC CERTS REQUIRED.

C	Mn	P	S	AL	SI
0.36	0.82	0.013	0.003	0.037	0.400

Coil: 397399 Heat: C39553  
Mill Coil#: 733497

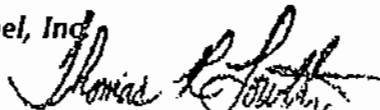
Coil #	Weight	Whse Coil #
397399-PA02	2411 Lbs	
397399-PA03	2411 Lbs	
397399-PA04	2411 Lbs	
397399-PA05	2411 Lbs	
397399-PA06	2411 Lbs	
397399-PA07	2411 Lbs	
397399-PA08	2411 Lbs	
397399-PA09	2411 Lbs	
397399-PB02	2411 Lbs	
397399-PB03	2411 Lbs	
397399-PB04	2411 Lbs	
397399-PB05	2411 Lbs	
397399-PB06	2411 Lbs	
397399-PB07	2411 Lbs	
397399-PB08	2411 Lbs	
397399-PB09	2411 Lbs	

Notes: MATERIAL MELTED AND MANUFACTURED IN THE USA.

11:30 AM DN

This report may not be reproduced, except in full, without prior written permission in this report regarding the material identification, type, and size is based on customer furnished information and samples and is shown for reference purposes only. Test results relate only to the samples tested. \* All tests not performed by KERRY STEEL PROCESSING metallurgical testing laboratory are subcontracted to other A2LA accredited laboratories. The physical and chemical analysis shown above were supplied by the producing mill or were tested on our equipment and are certified as correct as contained in the records of the corporation, using the following standards: ASTM: A370, E8, E18, E415, E517, E643, E646. \*\*\* ISO 9001 - 2000 - A2LA ACCREDITED \*\*\* Certificate # 1540.01  
Kerry Steel Processing Metallurgical Testing Laboratory, 4343 Wyoming, Dearborn, Michigan 48126 (313) 581-3500

Kerry Steel, Inc.



# HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17585

Invoice No. B7010701

Invoice Date 01/17/07

Sales Order K09478

Cert No Inv Line No Item No

Quantity Lot No

Assembly No

Haydon PO

31106 130000 PTU075175

590 JK961A

Heat 454630

A47284

# INSPECTION CERTIFICATE

JK961A

SET LOT NO.

**UNYITE, INC.**

One Unyite Drive  
Peru, Illinois 61354

815-224-2221 — FAX # 815-224-3434



Specification	Size	Quantity
ASTM F1852 Type 1	3/4-10 UNC X 1-3/4	35,100 pcs.
ASTM A563 Grade DH		
ASTM F436 Type 1		

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

**BOLT LOT NO.** JK961

Date: Jan. 10, '07

Mechanical Property of Full Size Bolts				Chemical Composition %									
Tensile Strength	Proof Load 28400 (Length Method)	Hardness		C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100	Mo x 100	B x 10,000
		Position of fracture	HRC										
Min. 40100	Part of Screw	Max. 4/- 0.0005 in.	34 MAX	30	15	Min. 60	Max. 40	Max. 50	-	-	-	-	-
Average 49750	Part of Screw	ALL PASS	30.7	52	30	60	40	50	-	-	5	2	26



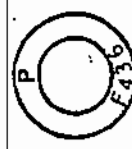
**NUT LOT NO.** JK791

Mechanical Property of Full Size Nuts				Chemical Composition %									
Hardness (HRC)	Hardness After 24 hr x 1000° F HRB	Proof Load (Lbf)	Heat Treatment °F (°C)		C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100	
			Quench	Temper									
Min. 24-38	HRB 89	58450	-	800	20	-	Min. 60	Max. 40	Max. 50	-	-	-	
Mean/Spes. 28.5	-	ALL PASS	1562	1184	55	-	60	40	50	17	10	14	



**WASHER LOT NO.** WB8947

Mechanical Property of Full Size Washers				Chemical Composition %									
Hardness (HRC)	Hardness (HRB)	Proof Load (Lbf)	Heat Treatment °F (°C)		C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100	
			Quench	Temper									
Min. 38-45	HRB 95	36000	-	800	20	-	Min. 60	Max. 40	Max. 50	-	-	-	
Mean/5 Pcs. 42.0	-	ALL PASS	1562	1184	44	22	71	8	26	17	10	14	



**Fastener Tension**

Fastener Tension
Spec. (lbf.)
Mean / 6 sets.
Standard Deviation

Min. 29000  
37672  
1810

Thread Accuracy (Bolt & Nut)
Bolt ASME B1.1 Class 2A
Nut ANSI B1.1 Class 2B

**REMARKS:**  
OFFICIAL SEAL  
JEAN MARGHERIO  
NOTARY PUBLIC - STATE OF ILLINOIS  
MY COMMISSION EXPIRES 10/18/09  
D1-11-07

Chief of Quality Assurance Section

Material used for the bolt, nut and washer were melted & manufactured in the USA. The product was manufactured in the USA to ASTM specifications. The bolt and nut are manufactured by Unyite. We hereby certify that the material described has been manufactured and inspected satisfactory with requirement of the above specification.





# CHARTER STEEL

A Division of  
Charter Manufacturing Company, Inc.

LOAD

## CHARTER STEEL TEST REPORT Reverse Has Text And Codes

1658 Cold Springs Road  
Saukville, Wisconsin 53080

(262) 268-2400

1-800-437-8789

FAX (262) 268-2570

UNYTITE, INC.  
ONE UNYTITE DRIVE  
PERU, IL 61354-  
Attn: ATTN: JEAN MARGHERIO

Cust. P.O.	29646
Cust Part#	C10B30SCO.732D
Charter Sales Order	177723
Heat #	454630
Ship Lot #	504119
Grade#	10B30 M SK FG RHQ
Process	DD
Finish Size	0.732

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed below and on the reverse side, and that it satisfies those requirements.

### Test Results of Heat Lot# 454630

Lab Code: 7388

Chemistry	C	MN	P	S	SI	NI	CR	MO	CU	SN	V
Wt%	0.31	0.75	0.008	0.007	0.250	0.05	0.05	0.02	0.09	0.006	0.001

	AL	N	B	TI	NB
	0.023	0.0070	0.0026	0.021	0.001

Jominy (HRC)	JOM01	JOM02	JOM03	JOM04	JOM05	JOM06	JOM07	JOM08	JOM09	JOM10	JOM11	JOM12
	53	51	50	41	26	22	21	20	20	20	0	0
Jominy (HRC)	JOM13	JOM14	JOM15	JOM16	JOM18	JOM20	JOM22	JOM24	JOM26	JOM28	JOM30	JOM32
	0	0	0	0	0	0	0	0	0	0	0	0

JOMINY SAMPLE TYPE ENGLISH = R JOMINY LAB = 0358-01  
CHEM. DEVIATION EXT.-GREEN = N/R  
E45 INCLUSION LAB = 0358-02

Cleanliness	ASTM-E45 Method A			
	A	B	C	D
Thin	1.0	1.5	0.0	0.5
Heavy	0.0	0.0	0.0	0.0

### Test Results of Rolling Lot # 355093

QC DEVIATION EXT.-GREEN = N/R

### Test Results of Processing Lot # 504119

	# of Tests	Min Value	Max Value	Mean Value	
TENSILE (KSI)	3	91.5	95.0	93.7	TENSILE LAB = 0358-02
REDUCTION OF AREA (%)	3	44	54	50	RA LAB = 0358-02
ROCKWELL B (HRBW)	3	91	92	91	RB LAB = 0358-02
WIRE SIZE (Inches)	10	0.731	0.731	0.731	
WIRE OUT OF ROUND (Inches)	10	0.000	0.000	0.000	

QC DEVIATION EXT.-PROCESSED = N/R

Specifications: Meets customer specifications with any applicable Charter Steel exceptions for the following customer documents:  
Customer Document = UNYTITE Revision = 5 Dated = 8-MAY-2003

Additional Comments:

Charter Steel  
Saukville, WI, USA



Tim Leahy  
Manager of Quality Assurance  
12/18/2006

Fax number: ( ) - Rem: Load1, Mail0, Fax0

The following statements are applicable to the material described on the front of this Test Report:

1. Except as noted, the steel supplied for this order was melted, rolled and processed in the United States.
2. Mercury was not used during the manufacture of this product; nor was the steel contaminated with mercury during processing.
3. Unless directed by the customer, there are no welds in any of the coils produced for this order.
4. The laboratory that generated the analytical or test results can be identified by the following key:

Certificate Number	Lab Code	Laboratory		Address
0358-01	7388	<b>CSMD</b>	Charter Steel Melting Division	1658 Cold Springs Road, Saukville, WI 53080
0358-02	8171	<b>CSR/D/ CSPD</b>	Charter Steel Rolling/ Processing Division	1658 Cold Springs Road, Saukville, WI 53080
0358-03	123633	<b>P4</b>	Charter Steel Ohio Processing Division	6255 US Highway 23, Risingsun, OH 43457
0358-04	125544	<b>CSC</b>	Charter Steel Cleveland	4300 E. 49 <sup>th</sup> St., Cuyahoga Heights, OH 44125-1004
		-	Subcontracted test performed by laboratory not in Charter Steel system	

5. When run by a Charter Steel laboratory, the following tests were performed according to the latest revisions of the specifications listed below, as noted in the Charter Steel Laboratory Quality Manual:

Test	Possible Laboratory	Specification
Chemistry Analysis	CSMD	ASTM E415; ASTM E1019
Macroetch	CSMD	ASTM E381
Hardenability (Jominy)	CSMD	ASTM A255; JIS G0561
Grain Size	CSMD	ASTM E112
Tensile Test	CSR/D/CSPD, P4, CSC	ASTM E8; ASTM A370
Rockwell Hardness	CSR/D/CSPD, P4, CSC	ASTM E18; ASTM A370
Microstructure (spheroidization)	CSR/D/CSPD, P4	ASTM A892
Cleanliness	CSR/D/CSPD, CSC	ASTM E45

Charter Steel has been accredited to perform all of the above tests by the American Association for Laboratory Accreditation (A2LA). These accreditations expire 01/31/07.

All other test results associated with a Charter Steel laboratory that appear on the front of this report, if any, were performed according to documented procedures developed by Charter Steel and are not accredited by A2LA.

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7. This test report cannot be reproduced or distributed except in full without the written permission of Charter Steel. The primary customer whose name and address appear on the front of this form may reproduce this test report, subject to the following restrictions:
  - It may be distributed only to their customers
  - Both sides of all pages must be reproduced in full
8. This certification is given subject to the terms and conditions of sale provided in Charter Steel's acknowledgment (designated by our Purchase Order number) to the customer's purchase order. Both Purchase Order numbers appear on the front page of this Report.
9. Where the customer has provided a specification, the results on the front of this test report conform to that specification unless otherwise noted on this test report.



**GERDAU AMERISTEEL**

ST PAUL STEEL MILL  
1678 RED ROCK ROAD  
ST PAUL MN 55119 USA  
(651) 731-5600

Chemical and Physical Test Report

M-035248

PRODUCED IN: ST PAUL

SHIP TO UNYTITE INC 1 UNYTITE DRIVE PERU, IL 61354	INVOICE TO UNYTITE INC 1 UNYTITE DRIVE PERU, IL 61354	SHIP DATE 12/14/06	CUST. ACCOUNT NO 70000042
---	--	-----------------------	------------------------------

SHAPE + SIZE	GRADE	SPECIFICATION	SALES ORDER	CUST P.O. NUMBER
R159Q	C1045M23F	A28/A29M-05, A576-90B(2000)	6093415-01	P001070-01
HEAT I.D.	C	Mn P S Si Cu Ni Cr Mo V Nb N Sh Au Ti Ca Co		
M630019	.44	.71 .008 .028 .22 .17 .10 .14 .022 .027 .001 .0082 .037 .002 .00200 .00140 .006		

Mechanical Test: Red R 38.97

Grain Test: FINE Grain Size Units 5.0  
Customer Requirements SOURCE: GA STP CASTING: STRAND CAST

CUST ITEM NUMBER: 81045SC1.00

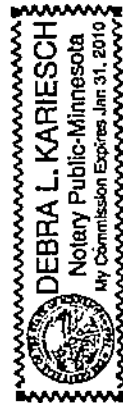
SHAPE + SIZE	GRADE	SPECIFICATION	SALES ORDER	CUST P.D. NUMBER
R159Q	C1045M23F	A28/A29M-05, A576-90B(2000)	6093415-01	P001070-01
HEAT I.D.	C	Mn P S Si Cu Ni Cr Mo V Nb N Sh Au Ti Ca Co		
M630020	.43	.71 .010 .025 .23 .21 .10 .18 .023 .027 .001 .0080 .021 .003 .00200 .00130 .007		

Mechanical Test: Red R 38.97

Grain Test: FINE Grain Size Units 5.0  
Customer Requirements SOURCE: GA STP CASTING: STRAND CAST

CUST ITEM NUMBER: 81045SC1.00

Quality Program Manual REV. 1, dtg 6/10/05



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

ST PAUL STEEL MILL



### **Lead and Mercury Content of Steel**

Lead and mercury are not purposefully introduced in the Gerda Ameristeel steel manufacturing process, and are not present at levels that would require disclosure on Material Safety Data Sheets. To the best of our knowledge, no mercury is present in our steel products.

Sincerely,

Gerda Ameristeel

A handwritten signature in black ink, appearing to read 'A. James Turner', is written over a faint horizontal line.

A. James Turner  
Director, Environment & Quality



**GERDAU AMERISTEEL™**

**Weld Repair of Finished Product**

We hereby certify that weld repair of finished products is not performed at Gerda Ameristeel.

Sincerely,

Gerda Ameristeel

**A. James Turner**  
Director, Environment & Quality

# Kerry Steel, Inc.

31731 Northwestern Hwy - Suite 200 - Farmington Hills, MI 48334  
(248) 352-0000 - (248) 865-9059

## CERTIFICATION OF STEEL ANALYSIS

Sold To: Prestige Stamping, Inc.  
23513 Groesbeck Hwy  
P.O. Box 1086  
Warren, MI 48089

P/O #: 14715 REL01  
Part #: P1480HOO

Work Order #: 186712 S/O #: 183541  
Size: 0.1220 x 5.5000 x Coil  
Desc: Hot Roll Pickled & Oiled C1040  
DOMESTIC CERTS REQUIRED.

C	Mn	P	S	AL	Si
0.36	0.82	0.013	0.003	0.037	0.400

Coil: 397399 Heat: C39553  
Mill Coil#: 733497

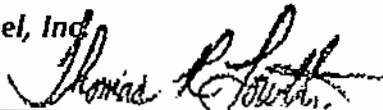
Coil #	Weight	Whse Coil #
397399-PA02	2411 Lbs	
397399-PA03	2411 Lbs	
397399-PA04	2411 Lbs	
397399-PA05	2411 Lbs	
397399-PA06	2411 Lbs	
397399-PA07	2411 Lbs	
397399-PA08	2411 Lbs	
397399-PA09	2411 Lbs	
397399-PB02	2411 Lbs	
397399-PB03	2411 Lbs	
397399-PB04	2411 Lbs	
397399-PB05	2411 Lbs	
397399-PB06	2411 Lbs	
397399-PB07	2411 Lbs	
397399-PB08	2411 Lbs	
397399-PB09	2411 Lbs	

Notes: MATERIAL MELTED AND MANUFACTURED IN THE USA.

11:30 AM ON

This report may not be reproduced, except in full, without prior written permission. This report regarding the material identification, type, and size is based on customer furnished information and samples and is shown for reference purposes only. Test results relate only to the samples tested. \* All tests not performed by KERRY STEEL PROCESSING metallurgical testing laboratory are subcontracted to other A2LA accredited laboratories. The physical and chemical analysis shown above were supplied by the producing mill or were tested on our equipment and are certified as correct as contained in the records of the corporation, using the following standards: ASTM: A370, E8, E18, E415, E517, E643, E646. \*\*\* ISO 9001 - 2000 - A2LA ACCREDITED \*\*\* Certificate # 1540.01  
Kerry Steel Processing Metallurgical Testing Laboratory, 4343 Wyoming, Dearborn, Michigan 48126 (313) 581-3500

Kerry Steel, Inc.



HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17585

Invoice No. B7010701

Invoice Date 01/17/07

Sales Order K09478

Cert No Inv Line No Item No

Quantity Lot No

Assembly No Haydon PO

18783 140000 HBA076000

5 C O F C

A42110

Bob Sadowski



Sincerely,

Our suppliers chemical and physical test reports, on all through hardened product, are file and are available upon request.

50-3H(10) X 10 LG Hex Cap

This letter will certify that the merchandise shipped to you against your P.O. #42110 has been purchased by Heads & Threads International from it's suppliers with the understanding that this product was manufactured to and conforms with the current and applicable ANSI/ASME, ASTM, SAE or IFT specifications as shown in the IFT Fasteners Manual sixth edition.

Haydon Jolts Inc  
1181 Unity Street  
Philadelphia Pa. 19124-3196

DATE 04/16/04



Heads & Threads International LLC  
200 Kennedy Drive  
Sayreville, NJ 08872  
Tel: 732.727.5800  
headsandthreads.com

Fax: Accounting 732.727.7130  
Corporate 732.727.9261  
Mills 732.727.5840  
Purchasing 732.727.9555  
Sales 732.727.5888



HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17585

Invoice No. B7010701

Invoice Date 01/17/07

Sales Order K09478

Cert No Inv Line No Item No

Quantity Lot No

Assembly No

Haydon PO

22576 150000 HBA075900

5 C O F C

A42387

# PERRY JOHNSON REGISTRARS, INC.



## Certificate of Registration

Perry Johnson Registrars, Inc. has awarded the Quality Management System of

Stiffast Inc. a Summit Business  
 2077 Stiffast Parkway, Stoughton, MA 01975  
 2009 Roseland Avenue, Cleveland, OH 44115

Registered to ISO 9001:1998 (based on including ISO 9002:1994)

This Registration is valid to the following scope of supply:  
 Manufacture and Distribution of Metal Fasteners for the Automotive Industry  
 Purchasing, Sales, and Warehousing Activities Supported by Stoughton, OH Location  
 Manufacturing Activities Supported by Cleveland, OH Location

Such products shall be manufactured by the Organization in accordance with the requirements of the ISO 9001:1998 (and ISO 9002:1994) Standard. The Organization shall be required to provide evidence of compliance with the requirements of the Standard. The Organization shall be required to provide evidence of compliance with the requirements of the Standard. The Organization shall be required to provide evidence of compliance with the requirements of the Standard.

FOR THE

Perry Johnson Registrars, Inc. (PJR)  
 2650 Berrington Suite 140  
 Springfield, MA 01103  
 (417) 338-5388



PERRY JOHNSON  
REGISTRARS, INC.

Certificate No.  
C2004-02553

Expiration Date  
December 14, 2006

Issue Date  
September 09, 2004

The quality of this certificate is maintained through ongoing surveillance.

# HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17585

Invoice No. B7010701

Invoice Date 01/17/07

Sales Order K09478

Cert No 23252

Inv Line No 160000

Item No HBA075700

Quantity 5

Lot No C O F C

Heat C O F C

Assembly No

Haydon PO

A43413

E-mail: info@stelfast.com • Website: www.stelfast.com  
Atlanta • Cleveland • Dallas • Edmonton • Houston • Montreal • Toronto

Ralph Faustino  
Philadelphia Sales Manager

We certify that the products shown in our catalog conform to LFI standards.

To Whom It May Concern:

Certificate of Compliance

SALES OFFICE  
901 - 13th Avenue  
Prospect Park, PA 19076  
Phone: (877) 999-7027  
(610) 534-5624  
Fax: (610) 534-5664

**STELFAST INC.**  
ISO 9002 / QS 9000 CERTIFIED



# HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Invoice No. B7010701

Customer PO 17585

Invoice Date 01/17/07

Sales Order K09478

Cert No 24301

Inv Line No 170000

Item No HNA075

Quantity 15

Lot No C O F C

Heat C O F C

Assembly No

Haydon PO

A43770

HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17585

Invoice No. B7010701

Invoice Date 01/17/07

Sales Order K09478

Cert No Inv Line No Item No

Quantity Lot No

Assembly No

30726 180000 WFA075

15 COFC

Haydon PO  
A45586

PO# 17627

**Cert Summary Page HAYDON BOLTS, INC.**

AMERICAN STEEL FABRICATORS INC      **Customer PO** 17627  
**Invoice No.** B7011026      **Invoice Date** 01/24/07      **Sales Order** K09789  
**Cert No**    **Inv Line No**    **Item No**      **Quantity**    **Lot No**      **Heat**      **Assembly No**      **Haydon PO**

31216	60000	PTU075175	300	JK951A	454630		A47284
Description: 3/4(10)X 1-3/4 F1852-1/A325 PT DOMESTIC      Manufacturer: UNYTITE INC.							
31176	70000	PTU075200	280	JM701A	454700		A47284
Description: 3/4(10)X 2" F1852-1/A325 PT DOMESTIC      Manufacturer: UNYTITE INC.							
31195	80000	PTU075225	270	JH771A	450160		A47284
Description: 3/4(10)X 2-1/4 F1852-1/A325 PT DOMESTIC      Manufacturer: UNYTITE INC.							

**RECEIVED**  
**JAN 30 2007**  
**AMERICAN STEEL**

# HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17627

Invoice No. B7011026

Invoice Date 01/24/07

Sales Order K09789

Cert No Inv Line No Item No

Quantity Lot No

Heat

Assembly No

Haydon PO

31216 60000 PTU075175

300 JK951A

454630

A47284



JK951A

# INSPECTION CERTIFICATE



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

SET LOT NO.

Specification	Size	Quantity
ASTM F1852 Type 1		
ASTM A563 Grade DH	3/4-10 UNC X 1-3/4	35,100 pcs.
ASTM F436 Type 1		

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

**BOLT LOT NO.** JK951

Date: Jan. 15, '07

Mechanical Property of Full Size Bolts				Heat Treatment		Chemical Composition %									
Tensile Strength	Proof Load 28400 (Length Method)	Hardness		Quench	Temper Min. 800	C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100	Mo x 100	B x 10,000
		Load (lb)	Position of fracture												
Spec.	40100	Part of Screw	34 MAX	..	..	30	15	60	Max. 40	Max. 50	-	-	-	-	-
Average	49875	Part of Screw	32.1	1580	869	31	25	75	8	7	9	5	5	2	26

**NUT LOT NO.** JK771

Mechanical Property of Full Size Nuts				Heat Treatment		Chemical Composition %									
Hardness (HRC)	After 24 hr x 1000° F HRB	Proof Load (Lbf)	°F (°C)		C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100			
			Quench	Temper											
Spec.	24 - 38	58450	800	Min. 800	20	-	60	Max. 40	Max. 50	-	-	-			
Mean/5 pcs.	28.7	ALL PASS	1562	1202	45	24	80	7	28	18	8	12			

**WASHER LOT NO.** WB8947

Mechanical Property of Full Size Washers				Heat Treatment		Chemical Composition %									
Hardness (HRC)	After 24 hr x 1000° F HRB	Proof Load (Lbf)	°F (°C)		C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100			
			Quench	Temper											
Spec.	38 - 45	58450	800	Min. 800	20	-	60	Max. 40	Max. 50	-	-	-			
Mean/5 Pcs.	42.0	ALL PASS	1562	1202	45	24	80	7	28	18	8	12			

Material used for the bolt, nut and washer were melted & manufactured in the USA. The product was manufactured in the USA to ASTM specifications. The bolt and nut are manufactured by Unytite. We hereby certify that the material described has been manufactured and inspected satisfactory with requirement of the above specification.

Thread Accuracy (Bolt & Nut)	Bolt	ASME B1.1 Class 2A
	Nut	ANSI B1.1 Class 2B
REMARKS	OFFICIAL SEAL Euan Marcherio NOTARY PUBLIC - STATE OF ILLINOIS MY COMMISSION EXPIRES 10/16/09 01-17-07	

### Fastener Tension

Fastener Tension	%	
	Spec. (lb)	Min.
Mean / 6 sets.	29000	35714
Standard Deviation		2183

Chief of Quality Assurance Section

*[Signature]*

LOAD



# CHARTER STEEL

## CHARTER STEEL TEST REPORT Reverse Has Text And Codes

A Division of  
Charter Manufacturing Company, Inc.

1658 Cold Springs Road  
Saukville, Wisconsin 53080  
(262) 268-2400  
1-800-437-8789  
FAX (262) 268-2570

**UNYTITE, INC.**  
**ONE UNYTITE DRIVE**  
**PERU, IL 61354-**  
**Attn: ATTN: JEAN MARGHERIO**

Cust. P.O.	29646
Cust Part#	C10B30SC0.732D
Charter Sales Order	177723
Heat #	454630
Ship Lot #	504119
Grade#	10B30 M SK FG RHQ
Process	DD
Finish Size	0.732

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed below and on the reverse side, and that it satisfies those requirements.

**Test Results of Heat Lot# 454630**

Lab Code: 7388

Chemistry	C	MN	P	S	SI	NI	CR	MO	CU	SN	V
Wt%	0.31	0.75	0.008	0.007	0.250	0.05	0.05	0.02	0.09	0.006	0.001
	AL	N	B	TI	NB						
	0.023	0.0070	0.0026	0.021	0.001						

Jominy (HRC)	JOM01	JOM02	JOM03	JOM04	JOM05	JOM06	JOM07	JOM08	JOM09	JOM10	JOM11	JOM12
	53	51	50	41	26	22	21	20	20	20	0	0
Jominy (HRC)	JOM13	JOM14	JOM15	JOM16	JOM18	JOM20	JOM22	JOM24	JOM26	JOM28	JOM30	JOM32
	0	0	0	0	0	0	0	0	0	0	0	0

JOMINY SAMPLE TYPE ENGLISH = R JOMINY LAB = 0358-01  
CHEM. DEVIATION EXT.-GREEN = N/R  
E45 INCLUSION LAB = 0358-02

Cleanliness	ASTM-E45 Method A			
	A	B	C	D
Thin	1.0	1.5	0.0	0.5
Heavy	0.0	0.0	0.0	0.0

**Test Results of Rolling Lot # 355093**

QC DEVIATION EXT.-GREEN = N/R

**Test Results of Processing Lot # 504119**

	# of Tests	Min Value	Max Value	Mean Value	
TENSILE (KSI)	3	91.5	95.0	93.7	TENSILE LAB = 0358-02
REDUCTION OF AREA (%)	3	44	54	50	RA LAB = 0358-02
ROCKWELL B (HRBW)	3	91	92	91	RB LAB = 0358-02
WIRE SIZE (Inches)	10	0.731	0.731	0.731	
WIRE OUT OF ROUND (Inches)	10	0.000	0.000	0.000	

QC DEVIATION EXT.-PROCESSED = N/R

Specifications: Meets customer specifications with any applicable Charter Steel exceptions for the following customer documents:  
Customer Document = UNYTITE Revision = 5 Dated = 8-MAY-2003

Additional Comments:

Charter Steel  
Saukville, WI, USA



*Tim Leahy*  
Tim Leahy  
Manager of Quality Assurance  
12/18/2006

The following statements are applicable to the material described on the front of this Test Report:

1. Except as noted, the steel supplied for this order was melted, rolled and processed in the United States.
2. Mercury was not used during the manufacture of this product; nor was the steel contaminated with mercury during processing.
3. Unless directed by the customer, there are no welds in any of the coils produced for this order.
4. The laboratory that generated the analytical or test results can be identified by the following key:

Certificate Number	Lab Code	Laboratory		Address
0358-01	7388	<b>CSMD</b>	Charter Steel Melting Division	1658 Cold Springs Road, Saukville, WI 53080
0358-02	8171	<b>CSR/D/ CSPD</b>	Charter Steel Rolling/ Processing Division	1658 Cold Springs Road, Saukville, WI 53080
0358-03	123633	<b>P4</b>	Charter Steel Ohio Processing Division	6255 US Highway 23, Risingsun, OH 43457
0358-04	125544	<b>CSC</b>	Charter Steel Cleveland	4300 E. 49 <sup>th</sup> St., Cuyahoga Heights, OH 44125-1004
*	*	--	Subcontracted test performed by laboratory not in Charter Steel system	

5. When run by a Charter Steel laboratory, the following tests were performed according to the latest revisions of the specifications listed below, as noted in the Charter Steel Laboratory Quality Manual:

Test	Possible Laboratory	Specification
Chemistry Analysis	CSMD	ASTM E415; ASTM E1019
Macroetch	CSMD	ASTM E381
Hardenability (Jominy)	CSMD	ASTM A255; JIS G0561
Grain Size	CSMD	ASTM E112
Tensile Test	CSR/D/CSPD, P4, CSC	ASTM E8; ASTM A370
Rockwell Hardness	CSR/D/CSPD, P4, CSC	ASTM E18; ASTM A370
Microstructure (spheroidization)	CSR/D/CSPD, P4	ASTM A892
Cleanliness	CSR/D/CSPD, CSC	ASTM E45

Charter Steel has been accredited to perform all of the above tests by the American Association for Laboratory Accreditation (A2LA). These accreditations expire 01/31/07.

All other test results associated with a Charter Steel laboratory that appear on the front of this report, if any, were performed according to documented procedures developed by Charter Steel and are not accredited by A2LA.

6. The test results on the front of this report are the true values measured on the samples taken from the production lot. They do not apply to any other sample.
7. This test report cannot be reproduced or distributed except in full without the written permission of Charter Steel. The primary customer whose name and address appear on the front of this form may reproduce this test report, subject to the following restrictions:
  - It may be distributed only to their customers
  - Both sides of all pages must be reproduced in full
8. This certification is given subject to the terms and conditions of sale provided in Charter Steel's acknowledgment (designated by our Purchase Order number) to the customer's purchase order. Both Purchase Order numbers appear on the front page of this Report.
9. Where the customer has provided a specification, the results on the front of this test report conform to that specification unless otherwise noted on this test report.



**CERTIFIED MATERIAL TEST REPORT**

CUSTOMER ORDER NUMBER	CUSTOMER PART NUMBER	HEAT NUMBER	WORK ORDER NUMBER	DATE
P001168	B1045SC10000	M22536	203498 101	12/01/06

REPORT TO  
TRACO  
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" RND	24' 10 1/2"

CUSTOMER SPECIFICATIONS  
SAE 1045; ASTM E381-91

**CHEMICAL ANALYSIS - (BAR AVERAGE)**

C	Mn	P	S	Si	Ni	Cr	Mo	Cu	Sn	Al
0.45	0.80	0.007	0.028	0.24	0.08	0.12	0.04	0.18	0.008	0.003
V	Nb									
0.055	0.002									

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= 0.004

PAGE 1

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

MACSTEEL  
3000 East Front Street  
Monroe, MI 48161

MACSTEEL-JACKSON   
MACSTEEL-FT SMITH   
MACSTEEL-MONROE

  
Quality Assurance Representative

**CERTIFIED MATERIAL TEST REPORT**

CUSTOMER ORDER NUMBER	CUSTOMER PART NUMBER	HEAT NUMBER	WORK ORDER NUMBER	DATE
P001168	B1045SC10000	M22536	203498 101	12/01/06

REPORT TO  
TRACO  
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" RND	24' 10 1/2"

CUSTOMER SPECIFICATIONS  
SAE 1045; ASTM E381-91

REDUCTION RATIO .

RATIO= 45.8 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  
3000 East Front Street  
Monroe, MI 48161

MACSTEEL-JACKSON   
MACSTEEL-FT SMITH   
MACSTEEL-MONROE

  
Quality Assurance Representative

*mill cert*

# Kerry Steel, Inc.

31731 Northwestern Hwy - Suite 200 - Farmington Hills, MI 48334  
(248) 352-0000 - (248) 865-9059

## CERTIFICATION OF STEEL ANALYSIS

Sold To: Prestige Stamping, Inc.  
23513 Groesbeck Hwy  
P.O. Box 1086  
Warren, MI 48089

P/O #: 14715 REL01  
Part #: P1480HOO

Work Order #: 186712 S/O #: 183541  
Size: 0.1220 x 5.5000 x Coil  
Desc: Hot Roll Pickled & Oiled C1040  
DOMESTIC CERTS REQUIRED.

C Mn P S AL SI

0.36 0.82 0.013 0.003 0.037 0.400

Coil: 397399 Heat: C39553  
Mill Coil#: 733497

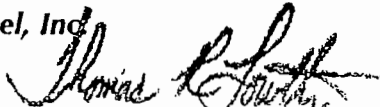
Coil #	Weight	Whse Coil #
397399-PA02	2411 Lbs	
397399-PA03	2411 Lbs	
397399-PA04	2411 Lbs	
397399-PA05	2411 Lbs	
397399-PA06	2411 Lbs	
397399-PA07	2411 Lbs	
397399-PA08	2411 Lbs	
397399-PA09	2411 Lbs	
397399-PB02	2411 Lbs	
397399-PB03	2411 Lbs	
397399-PB04	2411 Lbs	
397399-PB05	2411 Lbs	
397399-PB06	2411 Lbs	
397399-PB07	2411 Lbs	
397399-PB08	2411 Lbs	
397399-PB09	2411 Lbs	

Notes : MATERIAL MELTED AND MANUFACTURED IN THE USA.

11:30 AM ON

This report may not be reproduced, except in full, without prior written permission in this report regarding the material identification, type, and size is based on customer furnished information and samples and is shown for reference purposes only. Test results relate only to the samples tested. \* All tests not performed by KERRY STEEL PROCESSING metallurgical testing laboratory are subcontracted to other A2LA accredited laboratories. The physical and chemical analysis shown above were supplied by the producing mill or were tested on our equipment and are certified as correct as contained in the records of the corporation, using the following standards: ASTM: A370, E8, E18, E415, E517, E643, E646. \*\*\* ISO 9001 - 2000 - A2LA ACCREDITED \*\*\* Certificate # 1540.01  
Kerry Steel Processing Metallurgical Testing Laboratory, 4343 Wyoming, Dearborn, Michigan 48126 (313) 581-3500

Kerry Steel, Inc.



# HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17627

Invoice No. B7011026

Invoice Date 01/24/07

Sales Order K09789

Cert No Inv Line No Item No

Quantity Lot No

Assembly No Haydon PO

31176 70000 PTU075200

280 JM701A

Heat 454700

A47284

# INSPECTION CERTIFICATE

JM701A

SET LOT NO.

**UNYTE, INC.**

One Unyrite Drive  
Peru, Illinois 61354



815-224-2221 — FAX # 815-224-3434

Specification	Size	Quantity
ASTM F1852 Type 1 ASTM A563 Grade DH ASTM F436 Type 1	3/4-10 UNC X 2	35,305 pcs.

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

**BOLT LOT NO.** JM701

Date: Jan. 15, '07

Mechanical Property of Full Size Bolts				Chemical Composition %														
Tensile Strength	Proof Load 28400 (Length Method)	Hardness		Heat Treatment		IDENTIFICATION		C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100	Mo x 100	B x 10,000	
		Position of fracture	HRC	Quench	Temper	Min.	Max.											Heat No.
Min. 40100	Max. 470000 in.	Part of Screw	34 MAX	—	800			30	15	60	Max. 40	Max. 50	—	—	—	—	—	—
Average 49150	ALL PASS	Part of Screw	32.1	1580	925	454700		31	26	76	7	9	9	6	10	3	23	—

**NUT LOT NO.** JK771

Mechanical Property of Full Size Nuts				Chemical Composition %									
Hardness After 24 hr x 1000° F HRB	Proof Load (Lbf)	Heat Treatment		IDENTIFICATION		C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100
		Quench	Temper	Min.	Max.								
Min. 24-38	58450	—	800			20	—	60	Max. 40	Max. 50	—	—	—
Spec. 28.7	ALL PASS	1562	1202	M22536		45	24	80	7	28	18	8	12

**WASHER LOT NO.** WB8947

Mechanical Property of Full Size Washers										Chemical Composition %									
Hardness (HRC)	Proof Load (Lbf)	Heat Treatment		IDENTIFICATION		C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100						
		Quench	Temper	Min.	Max.									Heat No.					
Min. 38-45	58450	—	800			—	—	—	Max. 40	Max. 50	—	—	—						
Spec. 42.0	ALL PASS	1562	1202	C39553		36	40	82	13	3	—	—	—						

Material used for the bolt, nut and washer were melted & manufactured in the USA. The product was manufactured in the USA to ASTM specifications. The bolt and nut are manufactured by Unyrite. We hereby certify that the material described has been manufactured and inspected satisfactory with requirement of the above specification.

Thread Accuracy (Bolt & Nut)	
Bolt	ASME B1.1 Class 2A
Nut	ANSI B1.1 Class 2B

**REMARKS:**  
  
 OFFICIAL SEAL  
 JEAN MARGHERIO  
 NOTARY PUBLIC - STATE OF ILLINOIS  
 MY COMMISSION EXPIRES: 11/18/09  
 01-16-07

Fastener Tension	
Spec. (lbf.)	29000
Mean / 6 sets.	34500
Standard Deviation	1058

Fastener Tension	
Spec. (lbf.)	29000
Mean / 6 sets.	34500
Standard Deviation	1058

Chief of Quality Assurance Section



LOAD



# CHARTER STEEL

A Division of  
Charter Manufacturing Company, Inc.

## CHARTER STEEL TEST REPORT Reverse Has Text And Codes

1658 Cold Springs Road  
Saukville, Wisconsin 53080  
(262) 268-2400  
1-800-437-8789  
FAX (262) 268-2570

**UNYTITE, INC.**  
**ONE UNYTITE DRIVE**  
**PERU, IL 61354-**  
**Attn: ATTEN: JEAN MARGHERIO**

Cust. P.O.	29646
Cust Part#	C10B30SCO.732D
Charter Sales Order	177723
Heat #	454700
Ship Lot #	504138
Grade#	10B30 M SK FG RHQ
Process	DD
Finish Size	0.732

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed below and on the reverse side, and that it satisfies those requirements.

### Test Results of Heat Lot# 454700

Lab Code: 7388

Chemistry	C	MN	P	S	SI	NI	CR	MO	CU	SN	V
Wt%	0.31	0.76	0.007	0.009	0.260	0.06	0.10	0.03	0.09	0.005	0.001
	AL	N	B	TI	NB						
	0.023	0.0060	0.0023	0.020	0.001						

Jominy (HRC)	JOM01	JOM02	JOM03	JOM04	JOM05	JOM06	JOM07	JOM08	JOM09	JOM10	JOM11	JOM12
	53	52	51	50	37	26	23	22	21	20	20	20
	JOM13	JOM14	JOM16	JOM16	JOM18	JOM20	JOM22	JOM24	JOM26	JOM28	JOM30	JOM32
	0	0	0	0	0	0	0	0	0	0	0	0

JOMINY SAMPLE TYPE ENGLISH = R JOMINY LAB = 0358-01  
CHEM. DEVIATION EXT.-GREEN = N/R  
E45 INCLUSION LAB = 0358-02

Cleanliness	ASTM-E45 Method A			
	A	B	C	D
Thin	1.0	1.0	0.0	0.5
Heavy	0.0	0.0	0.0	0.5

### Test Results of Rolling Lot # 355092

QC DEVIATION EXT.-GREEN = N/R

### Test Results of Processing Lot # 504138

	# of Tests	Min Value	Max Value	Mean Value	
TENSILE (KSI)	3	95.6	96.5	96.2	TENSILE LAB = 0358-02
REDUCTION OF AREA (%)	3	51	53	52	RA LAB = 0358-02
ROCKWELL B (HRBW)	3	91	92	91	RB LAB = 0358-02
WIRE SIZE (Inches)	21	0.731	0.731	0.731	
WIRE OUT OF ROUND (Inches)	21	0.000	0.000	0.000	

QC DEVIATION EXT.-PROCESSED = N/R

Specifications: Meets customer specifications with any applicable Charter Steel exceptions for the following customer documents:  
Customer Document = UNYTITE Revision = 5 Dated = 8-MAY-2003

Additional Comments:

Charter Steel  
Saukville, WI, USA



Tim Leahy  
Manager of Quality Assurance  
12/18/2006

Fax number: ( ) - Rem: Load1,Mail0,Fax0

The following statements are applicable to the material described on the front of this Test Report:

1. Except as noted, the steel supplied for this order was melted, rolled and processed in the United States.
2. Mercury was not used during the manufacture of this product; nor was the steel contaminated with mercury during processing.
3. Unless directed by the customer, there are no welds in any of the coils produced for this order.
4. The laboratory that generated the analytical or test results can be identified by the following key:

Certificate Number	Lab Code	Laboratory		Address
0358-01	7388	<b>CSMD</b>	Charter Steel Melting Division	1658 Cold Springs Road, Saukville, WI 53080
0358-02	8171	<b>CSR/ CSPD</b>	Charter Steel Rolling/ Processing Division	1658 Cold Springs Road, Saukville, WI 53080
0358-03	123633	<b>P4</b>	Charter Steel Ohio Processing Division	6255 US Highway 23, Risingsun, OH 43457
0358-04	125544	<b>CSC</b>	Charter Steel Cleveland	4300 E. 49 <sup>th</sup> St., Cuyahoga Heights, OH 44125-1004
*	*	—	Subcontracted test performed by laboratory not in Charter Steel system	

5. When run by a Charter Steel laboratory, the following tests were performed according to the latest revisions of the specifications listed below, as noted in the Charter Steel Laboratory Quality Manual:

Test	Possible Laboratory	Specification
Chemistry Analysis	CSMD	ASTM E415; ASTM E1019
Macroetch	CSMD	ASTM E381
Hardenability (Jominy)	CSMD	ASTM A255; JIS G0561
Grain Size	CSMD	ASTM E112
Tensile Test	CSR/ CSPD, P4, CSC	ASTM E8; ASTM A370
Rockwell Hardness	CSR/ CSPD, P4, CSC	ASTM E18; ASTM A370
Microstructure (spheroidization)	CSR/ CSPD, P4	ASTM A892
Cleanliness	CSR/ CSPD, CSC	ASTM E45

Charter Steel has been accredited to perform all of the above tests by the American Association for Laboratory Accreditation (A2LA). These accreditations expire 01/31/07.

All other test results associated with a Charter Steel laboratory that appear on the front of this report, if any, were performed according to documented procedures developed by Charter Steel and are not accredited by A2LA.

6. The test results on the front of this report are the true values measured on the samples taken from the production lot. They do not apply to any other sample.
7. This test report cannot be reproduced or distributed except in full without the written permission of Charter Steel. The primary customer whose name and address appear on the front of this form may reproduce this test report, subject to the following restrictions:
  - It may be distributed only to their customers
  - Both sides of all pages must be reproduced in full
8. This certification is given subject to the terms and conditions of sale provided in Charter Steel's acknowledgment (designated by our Purchase Order number) to the customer's purchase order. Both Purchase Order numbers appear on the front page of this Report.
9. Where the customer has provided a specification, the results on the front of this test report conform to that specification unless otherwise noted on this test report.



**CERTIFIED MATERIAL TEST REPORT**

<b>CUSTOMER ORDER NUMBER</b> P001168	<b>CUSTOMER PART NUMBER</b> B1045SC10000	<b>HEAT NUMBER</b> M22536	<b>WORK ORDER NUMBER</b> 203498 101	<b>DATE</b> 12/01/06
---	---	------------------------------	--	-------------------------

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

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

**ORDERED**

<b>GRADE</b> 1045	<b>SIZE</b> 1" RND	<b>LENGTH</b> 24' 10 1/2"
----------------------	-----------------------	------------------------------

**CUSTOMER SPECIFICATIONS**  
SAE 1045; ASTM E381-91

**CHEMICAL ANALYSIS - (BAR AVERAGE)**

C	Mn	P	S	Si	Ni	Cr	Mo	Cu	Sn	Al
0.45	0.80	0.007	0.028	0.24	0.08	0.12	0.04	0.18	0.008	0.003
V	Nb									
0.055	0.002									

**GRAIN SIZE** SPECIFICATION ASTM E112 FINE GRAIN 5-8

**MACROCLEANLINESS** SPECIFICATION ASTM E381

PLATE I

PLATE II

	S	R	C	
AVERAGE	1	1	1	NONE

**DECARB** SPECIFICATION ASTM E1077

F TOTAL= 0.004

PAGE 1

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

MACSTEEL  
3000 East Front Street  
Monroe, MI 48161

MACSTEEL-JACKSON   
MACSTEEL-FT SMITH   
MACSTEEL-MONROE

  
Quality Assurance Representative

**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
P001168	B1045SC10000	M22536	203498 101	12/01/06

REPORT TO  
TRACO  
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" RND	24' 10 1/2"

CUSTOMER SPECIFICATIONS  
SAE 1045; ASTM E381-91

REDUCTION RATIO

RATIO= 45.8 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  
3000 East Front Street  
Monroe, MI 48161

MACSTEEL-JACKSON   
MACSTEEL-FT SMITH   
MACSTEEL-MONROE

  
Quality Assurance Representative

*mill cert*

# Kerry Steel, Inc.

31731 Northwestern Hwy - Suite 200 - Farmington Hills, MI 48334  
(248) 352-0000 - (248) 865-9059

## CERTIFICATION OF STEEL ANALYSIS

Sold To: Prestige Stamping, Inc.  
23513 Groesbeck Hwy  
P.O. Box 1086  
Warren, MI 48089

P/O #: 14715 REL01  
Part #: P1480HOO

Work Order #: 186712 S/O #: 183541  
Size: 0.1220 x 5.5000 x Coil  
Desc: Hot Roll Pickled & Oiled C1040  
DOMESTIC CERTS REQUIRED.

C	Mn	P	S	AL	Si
0.36	0.82	0.013	0.003	0.037	0.400

Coil: 397399 Heat: C39553  
Mill Coil# :733497

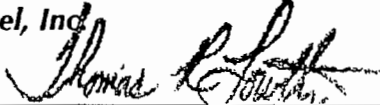
Coil #	Weight	Whse Coil #
397399-PA02	2411 Lbs	
397399-PA03	2411 Lbs	
397399-PA04	2411 Lbs	
397399-PA05	2411 Lbs	
397399-PA06	2411 Lbs	
397399-PA07	2411 Lbs	
397399-PA08	2411 Lbs	
397399-PA09	2411 Lbs	
397399-PB02	2411 Lbs	
397399-PB03	2411 Lbs	
397399-PB04	2411 Lbs	
397399-PB05	2411 Lbs	
397399-PB06	2411 Lbs	
397399-PB07	2411 Lbs	
397399-PB08	2411 Lbs	
397399-PB09	2411 Lbs	

Notes : MATERIAL MELTED AND MANUFACTURED IN THE USA.

*11:30 AM ON*

This report may not be reproduced, except in full, without prior written permission in this report regarding the material identification, type, and size is based on customer furnished information and samples and is shown for reference purposes only. Test results relate only to the samples tested. \* All tests not performed by KERRY STEEL PROCESSING metallurgical testing laboratory are subcontracted to other A2LA accredited laboratories. The physical and chemical analysis shown above were supplied by the producing mill or were tested on our equipment and are certified as correct as contained in the records of the corporation, using the following standards: ASTM: A370, E8, E18, E415, E517, E643, E646. \*\*\* ISO 9001 - 2000 - A2LA ACCREDITED \*\*\* Certificate # 1540.01  
Kerry Steel Processing Metallurgical Testing Laboratory, 4343 Wyoming, Dearborn, Michigan 48126 (313) 581-3500

Kerry Steel, Inc



# HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Invoice No. B7011026

Invoice Date 01/24/07

Customer PO 17627

Sales Order K09789

Cert No 31195

Inv Line No 80000

Item No PTU075225

Quantity 270

Lot No JH771A

Heat

450160

Assembly No

Haydon PO

A47284

JH771A

# INSPECTION CERTIFICATE

SET LOT NO.

**UNYTITE, INC.**

One Unytite Drive  
Peru, Illinois 61354

815-224-2221 — FAX # 815-224-3434



Specification	Size	Quantity
ASTM F1852 Type 1	3/4-10 UNC X 2-1/4	34,045 pcs.
ASTM A563 Grade DH		
ASTM F436 Type 1		

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

**BOLT LOT NO.** JH771

Date: Jan. 17, '07

Mechanical Property of Full Size Bolts				Chemical Composition %													
Tensile Strength	Position of fracture	Proof Load (Length Method)	HRC	Heat Treatment		IDENTIFICATION											
				Quench	Temper	C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100	Mo x 100	B x 10,000		
Min. 40100	Part of Screw	Max. 47-0.0005 in.	34 MAX	--	Min. 800												30
Average 49850	Part of Screw	ALL PASS	32.5	1580	869	450160	31	27	84	7	8	10	5	5	1		28

**NUT LOT NO.** JK762

Mechanical Property of Full Size Nuts				Chemical Composition %												
Hardness (HRC)	Hardness After 24 hr x 1000° F HRB	Proof Load (Lbf)	Heat Treatment	IDENTIFICATION		IDENTIFICATION										
				Quench	Temper	C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100			
Min. 24-38	HRB 89	58450	--	Min. 800										20	--	Min. 60
Mean/5pcs 28.7	—	ALL PASS	1562	1202		M22536	45	24	80	7	28	18	8	12		

**WASHER LOT NO.** WB8947

Mechanical Property of Full Size Washers				Chemical Composition %												
Hardness (HRC)	Hardness	Proof Load (Lbf)	Heat Treatment	IDENTIFICATION		IDENTIFICATION										
				Quench	Temper	C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100			
Min. 38-45	HRB 89	58450	--	Min. 800										36	--	--
Mean/5 Pcs 42.0	—	ALL PASS	1562	1202		C39553	36	40	82	13	3					

Material used for the bolt, nut and washer were melted & manufactured in the USA. The product was manufactured in the USA to ASTM specifications. The bolt and nut are manufactured by Unytite. We hereby certify that the material described has been manufactured and inspected satisfactory with requirement of the above specification.

Thread Accuracy (Bolt & Nut)	
Bolt	ASME B1.1 Class 2A
Nut	ANSI B1.1 Class 2B

Fastener Tension	
Spec. (lbf.)	29000
Mean / 6 sets.	38998
Standard Deviation	1241

Chief of Quality Assurance Section

*[Signature]*

**REMARKS:**  
 OFFICIAL SEAL  
 JEAN MARGHERIO  
 NOTARY PUBLIC - STATE OF ILLINOIS  
 MY COMMISSION EXPIRES: 10/18/09  
 1-8-07

LOAD



# CHARTER STEEL

## CHARTER STEEL TEST REPORT Reverse Has Text And Codes

A Division of  
Charter Manufacturing Company, Inc.

1658 Cold Springs Road  
Saukville, Wisconsin 53080  
(262) 268-2400  
1-800-437-8789  
FAX (262) 268-2570

**UNYTITE, INC.**  
**ONE UNYTITE DRIVE**  
**PERU, IL 61354-**  
**Attn: ATTEN: JEAN MARGHERIO**

Cust. P.O.	29646
Cust Part#	C10B30SCO.732D
Charter Sales Order	177723
Heat #	450160
Ship Lot #	501644
Grade#	10B30 M SK FG RHQ
Process	DD
Finish Size	0.732

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed below and on the reverse side, and that it satisfies those requirements.

### Test Results of Heat Lot# 450160

Lab Code: 7388												
Chemistry	C	MN	P	S	SI	NI	CR	MO	CU	SN	V	
Wt%	0.31	0.84	0.007	0.008	0.270	0.05	0.05	0.01	0.10	0.007	0.001	
	AL	N	B	TI	NB							
	0.023	0.0060	0.0028	0.021	0.001							
Jominy (HRC)	JOM01	JOM02	JOM03	JOM04	JOM05	JOM06	JOM07	JOM08	JOM09	JOM10	JOM11	JOM12
	53	52	51	49	36	25	22	22	21	21	20	20
	JOM13	JOM14	JOM15	JOM16	JOM18	JOM20	JOM22	JOM24	JOM26	JOM28	JOM30	JOM32
	0	0	0	0	0	0	0	0	0	0	0	0

JOMINY SAMPLE TYPE ENGLISH = R JOMINY LAB = 0358-01  
CHEM. DEVIATION EXT.-GREEN = N/R  
E45 INCLUSION LAB = 0358-02

Cleanliness	ASTM-E45 Method A			
	A	B	C	D
Thin	0.5	1.5	0.0	0.5
Heavy	0.0	0.0	0.0	0.0

### Test Results of Rolling Lot # 352876

QC DEVIATION EXT.-GREEN = N/R

### Test Results of Processing Lot # 501644

	# of Tests	Min Value	Max Value	Mean Value	
TENSILE (KSI)	3	95.4	97.2	96.4	TENSILE LAB = 0358-02
REDUCTION OF AREA (%)	3	53	55	54	RA LAB = 0358-02
ROCKWELL B (HRBW)	3	88	88	88	RB LAB = 0358-02
WIRE SIZE (Inches)	41	0.731	0.732	0.731	
WIRE OUT OF ROUND (Inches)	41	0.000	0.000	0.000	

QC DEVIATION EXT.-PROCESSED = N/R

Specifications: Meets customer specifications with any applicable Charter Steel exceptions for the following customer documents:  
Customer Document = UNYTITE Revision = 5 Dated = 8-MAY-2003

Additional Comments:

Charter Steel  
Saukville, WI, USA



*Tim Leahy*  
Tim Leahy  
Manager of Quality Assurance  
11/15/2006



The following statements are applicable to the material described on the front of this Test Report:

1. Except as noted, the steel supplied for this order was melted, rolled and processed in the United States.
2. Mercury was not used during the manufacture of this product; nor was the steel contaminated with mercury during processing.
3. Unless directed by the customer, there are no welds in any of the coils produced for this order.
4. The laboratory that generated the analytical or test results can be identified by the following key:

Certificate Number	Lab Code	Laboratory		Address
0358-01	7388	<b>CSMD</b>	Charter Steel Melting Division	1658 Cold Springs Road, Saukville, WI 53080
0358-02	8171	<b>CSRD/ CSPD</b>	Charter Steel Rolling/ Processing Division	1658 Cold Springs Road, Saukville, WI 53080
0358-03	123633	<b>P4</b>	Charter Steel Ohio Processing Division	6255 US Highway 23, Risingsun, OH 43457
0358-04	125544	<b>CSC</b>	Charter Steel Cleveland	4300 E. 49 <sup>th</sup> St., Cuyahoga Heights, OH 44125-1004
*	*	--	Subcontracted test performed by laboratory not in Charter Steel system	

5. When run by a Charter Steel laboratory, the following tests were performed according to the latest revisions of the specifications listed below, as noted in the Charter Steel Laboratory Quality Manual:

Test	Possible Laboratory	Specification
Chemistry Analysis	CSMD	ASTM E415; ASTM E1019
Macroetch	CSMD	ASTM E381
Hardenability (Jominy)	CSMD	ASTM A255; JIS G0561
Grain Size	CSMD	ASTM E112
Tensile Test	CSRD/CSPD, P4, CSC	ASTM E8; ASTM A370
Rockwell Hardness	CSRD/CSPD, P4, CSC	ASTM E18; ASTM A370
Microstructure (spheroidization)	CSRD/CSPD, P4	ASTM A892
Cleanliness	CSRD/CSPD, CSC	ASTM E45

Charter Steel has been accredited to perform all of the above tests by the American Association for Laboratory Accreditation (A2LA). These accreditations expire 01/31/07.

All other test results associated with a Charter Steel laboratory that appear on the front of this report, if any, were performed according to documented procedures developed by Charter Steel and are not accredited by A2LA.

6. The test results on the front of this report are the true values measured on the samples taken from the production lot. They do not apply to any other sample.
7. This test report cannot be reproduced or distributed except in full without the written permission of Charter Steel. The primary customer whose name and address appear on the front of this form may reproduce this test report, subject to the following restrictions:
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  - Both sides of all pages must be reproduced in full
8. This certification is given subject to the terms and conditions of sale provided in Charter Steel's acknowledgment (designated by our Purchase Order number) to the customer's purchase order. Both Purchase Order numbers appear on the front page of this Report.
9. Where the customer has provided a specification, the results on the front of this test report conform to that specification unless otherwise noted on this test report.



**CERTIFIED MATERIAL TEST REPORT**

<b>CUSTOMER ORDER NUMBER</b> P001168	<b>CUSTOMER PART NUMBER</b> B1045SC10000	<b>HEAT NUMBER</b> M22536	<b>WORK ORDER NUMBER</b> 203498 101	<b>DATE</b> 12/01/06
---	---	------------------------------	--	-------------------------

REPORT TO  
TRACO  
UNYTITE, INC.

SHIP TO  
UNYTITE, INC.

ONE UNYTITE DRIVE  
PERU , IL 61354-9710

ONE UNYTITE DRIVE  
PERU , IL 61354

**ORDERED**

<b>GRADE</b> 1045	<b>SIZE</b> 1" RND	<b>LENGTH</b> 24' 10 1/2"
----------------------	-----------------------	------------------------------

**CUSTOMER SPECIFICATIONS**  
SAE 1045; ASTM E381-91

**CHEMICAL ANALYSIS - (BAR AVERAGE)**

C	Mn	P	S	Si	Ni	Cr	Mo	Cu	Sn	Al
0.45	0.80	0.007	0.028	0.24	0.08	0.12	0.04	0.18	0.008	0.003
V	Nb									
0.055	0.002									

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= 0.004

PAGE 1

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

MACSTEEL  
3000 East Front Street  
Monroe, MI 48161

MACSTEEL-JACKSON   
MACSTEEL-FT SMITH   
MACSTEEL-MONROE

  
Quality Assurance Representative

**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
P001168	B1045SC10000	M22536	203498 101	12/01/06

REPORT TO  
TRACO  
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" RND	24' 10 1/2"

CUSTOMER SPECIFICATIONS  
SAE 1045; ASTM E381-91

REDUCTION RATIO

RATIO= 45.8 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  
3000 East Front Street  
Monroe, MI 48161

MACSTEEL-JACKSON   
MACSTEEL-FT SMITH   
MACSTEEL-MONROE

  
Quality Assurance Representative

*mill cert*

# Kerry Steel, Inc.

31731 Northwestern Hwy - Suite 200 - Farmington Hills, MI 48334  
(248) 352-0000 - (248) 865-9059

## CERTIFICATION OF STEEL ANALYSIS

Sold To: Prestige Stamping, Inc.  
23513 Groesbeck Hwy  
P.O. Box 1086  
Warren, MI 48089

P/O #: 14715 REL01  
Part #: P1480HOO

Work Order #: 186712 S/O #: 183541  
Size: 0.1220 x 5.5000 x Coil  
Desc: Hot Roll Pickled & Oiled C1040  
DOMESTIC CERTS REQUIRED.

C	Mn	P	S	AL	Si
0.36	0.82	0.013	0.003	0.037	0.400

Coil: 397399 Heat: C39553  
Mill Coil# :733497

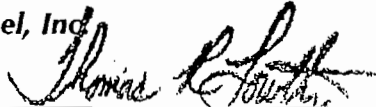
Coil #	Weight	Whse Coil #
397399-PA02	2411 Lbs	
397399-PA03	2411 Lbs	
397399-PA04	2411 Lbs	
397399-PA05	2411 Lbs	
397399-PA06	2411 Lbs	
397399-PA07	2411 Lbs	
397399-PA08	2411 Lbs	
397399-PA09	2411 Lbs	
397399-PB02	2411 Lbs	
397399-PB03	2411 Lbs	
397399-PB04	2411 Lbs	
397399-PB05	2411 Lbs	
397399-PB06	2411 Lbs	
397399-PB07	2411 Lbs	
397399-PB08	2411 Lbs	
397399-PB09	2411 Lbs	

Notes : MATERIAL MELTED AND MANUFACTURED IN THE USA.

11:30AM ON

This report may not be reproduced, except in full, without prior written permission in this report regarding the material identification, type, and size is based on customer furnished information and samples and is shown for reference purposes only. Test results relate only to the samples tested. \* All tests not performed by KERRY STEEL PROCESSING metallurgical testing laboratory are subcontracted to other A2LA accredited laboratories. The physical and chemical analysis shown above were supplied by the producing mill or were tested on our equipment and are certified as correct as contained in the records of the corporation, using the following standards: ASTM: A370, E8, E18, E415, E517, E643, E646. \*\*\* ISO 9001 - 2000 - A2LA ACCREDITED \*\*\* Certificate # 1540.01  
Kerry Steel Processing Metallurgical Testing Laboratory, 4343 Wyoming, Dearborn, Michigan 48126 (313) 581-3500

Kerry Steel, Inc



POT# 17642

RECEIVED

**Cert Summary Page HAYDON BOLTS, INC.**

JAN 31 2007

AMERICAN STEEL

AMERICAN-STEEL FABRICATORS INC

Customer PO 17642

Invoice No. Invoice Date Quantity Lot No Sales Order K09860

Cert No	Line No	Item No	Quantity	Lot No	Heat	Manufacturer	Assembly No	Haydon PO
29730	60000	PTF113425	15	AV901A	423860	UNYTITE INC.		A44772
Description: 1-1/8(7)X 4-1/4 F2280/A490-1 TC BOLT DOMESTIC								
28469	70000	PTF113400	35	AJ801A	388570	UNYTITE INC.		A44772
Description: 1-1/8(7)X 4" F2280/A490-1 TC BOLT DOMESTIC								
30003	80000	PTF113375	55	AZ001A	423860	UNYTITE INC.		A44772
Description: 1-1/8(7)X 3-3/4 F2280/A490-1 TC BOLT DOMESTIC								
30299	90000	PTF113350	15	AX941A	423860	UNYTITE INC.		A44772
Description: 1-1/8(7)X 3-1/2 F2280/A490-1 TC BOLT DOMESTIC								
29572	100000	PTF113325	50	AV831A	415550	UNYTITE INC.		A44772
Description: 1-1/8(7)X 3-1/4 F2280/A490-1 TC BOLT DOMESTIC								
17536	110000	PTF113250	10	73131A	299089	UNYTITE INC.		A41485
Description: 1-1/8(7)X 2-1/2 F2280/A490-1 TC BOLT DOMESTIC								
29661	120000	PTF100375	20	AV781A	425870	UNYTITE INC.		A44772
Description: 1(8)X 3-3/4 F2280/A490-1 TC BOLT DOMESTIC								
31085	130000	PTF100350	55	JH481A	448130	UNYTITE INC.		A44772
Description: 1(8)X 3-1/2 F2280/A490-1 TC BOLT DOMESTIC								
30947	140000	PTF100325	90	JH461A	448130	UNYTITE INC.		A44772
Description: 1(8)X 3-1/4 F2280/A490-1 TC BOLT DOMESTIC								
31056	150000	PTF100300	40	JH441A	448130	UNYTITE INC.		A44772
Description: 1(8)X 3" F2280/A490-1 TC BOLT DOMESTIC								
31108	160000	PTF100275	20	JH421A	448130	UNYTITE INC.		A44772
Description: 1(8)X 2-3/4 F2280/A490-1 TC BOLT DOMESTIC								

# Cert Summary Page HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17642

Invoice No. K09860

Invoice Date 01/25/07

Sales Order K09860

Cert No - Inv Line No Item No Quantity Lot No Heat Assembly No Haydon PO

30696 17000 PTF100250 5 AZ981A 418210 UNYTTITE INC. A44772

Description: 1(8)X 2-1/2 F2280/A490-1 TC BOLT DOMESTIC Manufacturer:

31054 180000 PTF100225 10 JH381A 448130 UNYTTITE INC. A44772

Description: 1(8)X 2-1/4 F2280/A490-1 TC BOLT DOMESTIC Manufacturer:

30507 20000 PTU087200 5 BC601A 444230 UNYTTITE INC. A44771

Description: 7/8(9)X 2" F1852-1/A325 PT DOMESTIC Manufacturer:

31083 210000 PTU075300 30 JH961A 452770 UNYTTITE INC. A47284

Description: 3/4(10)X 3" F1852-1/A325 PT DOMESTIC Manufacturer:

30988 220000 PTU075275 45 JH921A 450150 UNYTTITE INC. A47284

Description: 3/4(10)X 2-3/4 F1852-1/A325 PT DOMESTIC Manufacturer:

31109 230000 PTU075250 480 JH871A 452770 UNYTTITE INC. A47284

Description: 3/4(10)X 2-1/2 F1852-1/A325 PT DOMESTIC Manufacturer:

31105 240000 PTU075225 825 JK401A 452780 UNYTTITE INC. A47284

Description: 3/4(10)X 2-1/4 F1852-1/A325 PT DOMESTIC Manufacturer:

31176 250000 PTU075200 835 JM701A 454700 UNYTTITE INC. A47284

Description: 3/4(10)X 2" F1852-1/A325 PT DOMESTIC Manufacturer:

31106 260000 PTU075175 890 JK961A 454630 UNYTTITE INC. A47284

Description: 3/4(10)X 1-3/4 F1852-1/A325 PT DOMESTIC Manufacturer:

22600 280000 HBA076100 10 COF C 42388

Description: 3/4(10)X 11" HEX BOLT A307A Manufacturer: HEADS & THREADS INT'L LLC

22574 290000 HBA075800 15 COF C 42387

Description: 3/4(10)X 8" LC HEX CAP SCREW Manufacturer: STELFAST FASTENERS INC.

**Cert Summary Page HAYDON BOLTS, INC.**

AMERICAN STEEL FABRICATORS INC      *Customer PO* 17642      *Invoice No.* K09860      *Invoice Date* 01/25/07      *Sales Order* K09860      *Heat*      *Assembly No*      *Haydon PO*

<i>Cert No.</i>	<i>Inv Line No</i>	<i>Item No</i>	<i>Quantity</i>	<i>Lot No</i>	<i>Heat</i>	<i>Assembly No</i>	<i>Haydon PO</i>
23252	30000	HBA075700	20	C OF C	C OF C		A43413
Description: 3/4(10)X 7" LC HEX CAP SCREW <i>Manufacturer:</i> STELFAST FASTENERS INC.							
24301	31000	HNA075	45	C OF C	C OF C		A43770
Description: 3/4(10) HEX NUT A563A <i>Manufacturer:</i> STELFAST FASTENERS INC.							
30726	32000	WFA075	45	C OF C			A45586
Description: 3/4 FLAT ROUND WASHER F844 <i>Manufacturer:</i> COATESVILLE WASHER CO.							

# HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17642

Invoice No. K09860

Invoice Date 01/25/07

Sales Order K09860

Cert No Inv Line No Item No

Quantity Lot No

Assembly No

Haydon PO  
A44772

29730 60000 PTF113425

15 AV901A

Heat  
423860



# INSPECTION CERTIFICATE

AV901A

**UNYRITE, INC.**  
One Unyrite Drive  
Peru, Illinois 61354

815-224-2221 — FAX # 815-224-3434



Date: Aug. 29, '06

Specification	Size	Quantity
ASTM A490 F2280 Type 1 ASTM A563 Grade DH ASTM F436 Type 1	1-1/8 UNC X 4-1/4	2,525 pcs.

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

**BOLT LOT NO.** AV901

Spec.	Mechanical Property of Full Size Bolts			Heat Treatment *F (°C)	IDENTIFICATION	Chemical Composition %									
	Tensile Strength	Proof Load 91.550 (Length Method)	Hardness			C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100	Mo x 100	B x 10,000
114450 132000 124475	ALL PASS	34.4	1580	1004	423860	41	24	91	1.1	12	8	5	95	17	1

**NUT LOT NO.** AW621

Hardness (HRC)	Hardness After 24 hr x 1000° F HRB	Proof Load (Lbf)	Heat Treatment *F (°C)		IDENTIFICATION	Chemical Composition %								
			Quench	Temper		C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100	
														Min.
24-38 28.6	HRB 89	133600 ALL PASS	1562	1049	599135	46	21	74	17	22	8	4	6	6

**WASHER LOT NO.** WB7376

Hardness (HRC)	Proof Load (Lbf)	Heat Treatment *F (°C)		IDENTIFICATION	Chemical Composition %								
		Quench	Temper		C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100	
													Min.
38-45 41.5	133600 ALL PASS	1562	1049	599135	46	21	74	17	22	8	4	6	6

Material used for the bolt, nut and washer were melted & manufactured in the USA. The product was manufactured in the USA to ASTM specifications. The bolt and nut are manufactured by Unyrite. We hereby certify that the material described has been manufactured and inspected satisfactory with requirement of the above specification.

Thread Accuracy (Bolt & Nut)	REMARKS
Bolt ASME B1.1 Class 2A	THESE BOLTS HAVE BEEN MAGNETIC PARTICLE INSPECTION IN ACCORDANCE WITH THE REQUIREMENTS OF SPECIFICATION ASTM A490
Nut ASME B1.1 Class 2B	

Fastener Tension	Fastener Tension
Spec. (lb.)	Min. 84000
Mean / 5 sets.	97788
Standard Deviation	4452

Chief of Quality Assurance Section

08-30-06

JEAN MARGHERIO  
NOTARY PUBLIC - STATE OF ILLINOIS  
MY COMMISSION EXPIRES 10/18/08

The following statements are applicable to the material described on the front of this Test Report:

1. Except as noted, the steel supplied for this order was melted, rolled and processed in the United States.
2. Mercury was not used during the manufacture of this product; nor was the steel contaminated with mercury during processing.
3. Unless directed by the customer, there are no welds in any of the coils produced for this order.
4. The laboratory that generated the analytical or test results can be identified by the following key:

Certificate Number	Lab Code	Laboratory		Address
0358-01	7388	CSMD	Charter Steel Melting Division	1658 Cold Springs Road, Saukville, WI 53080
0358-02	8171	CSR/ CSPD	Charter Steel Rolling/ Processing Division	1658 Cold Springs Road, Saukville, WI 53080
0358-03	123633	P4	Charter Steel Ohio Processing Division	6255 US Highway 23, Risingsun, OH 43457
0358-04	125544	CSC	Charter Steel Cleveland	4300 E. 49 <sup>th</sup> St., Cuyahoga Heights, OH 44125-1004
*	*	--	Subcontracted test performed by laboratory not in Charter Steel system	

5. When run by a Charter Steel laboratory, the following tests were performed according to the latest revisions of the specifications listed below, as noted in the Charter Steel Laboratory Quality Manual:

Test	Possible Laboratory	Specification
Chemistry Analysis	CSMD	ASTM E415; ASTM E1019
Macroetch	CSMD	ASTM E381
Hardenability (Jominy)	CSMD	ASTM A255; JIS G0561
Grain Size	CSMD	ASTM E112
Tensile Test	CSR/ CSPD, P4, CSC	ASTM E8; ASTM A370
Rockwell Hardness	CSR/ CSPD, P4, CSC	ASTM E18; ASTM A370
Microstructure (spheroidization)	CSR/ CSPD, P4	ASTM A892
Cleanliness	CSR/ CSPD, CSC	ASTM E45

Charter Steel has been accredited to perform all of the above tests by the American Association for Laboratory Accreditation (A2LA). These accreditations expire 01/31/07.

All other test results associated with a Charter Steel laboratory that appear on the front of this report, if any, were performed according to documented procedures developed by Charter Steel and are not accredited by A2LA.

6. The test results on the front of this report are the true values measured on the samples taken from the production lot. They do not apply to any other sample.
7. This test report cannot be reproduced or distributed except in full without the written permission of Charter Steel. The primary customer whose name and address appear on the front of this form may reproduce this test report, subject to the following restrictions:
  - It may be distributed only to their customers
  - Both sides of all pages must be reproduced in full
8. This certification is given subject to the terms and conditions of sale provided in Charter Steel's acknowledgment (designated by our Purchase Order number) to the customer's purchase order. Both Purchase Order numbers appear on the front page of this Report.
9. Where the customer has provided a specification, the results on the front of this test report conform to that specification unless otherwise noted on this test report.



# TEST REPORT

# MITTAL

REQ., JOB, CONTRACT NO.		PURCHASE ORDER NO. 32139	
V E MITTAL STEEL USA N INDIANA HARBOR BAR PRODUCTS D 3300 DICKEY ROAD O R EAST CHICAGO, INDIANA 46312	SUPPLIER'S NO.	BILL ORDER NO. 211130	
	REPORT PRINT DATE 09/13/2005		

TEST REPORT TO:  
UNYTITE

SHIP TO:  
UNYTITE, INC

1 UNYTITE DR

ONE UNYTITE DRIVE

PERU IL

61354

PERU IL, 61354

CMS (REG TM) SQ HOT ROLLED ROUNDS SAE 1045 MOD /RMS-009 (03/09/01) 5 / FINE GRAIN/CWQ/RESTRICTED CHEMICAL REQ/RESTRICTED MAX INCIDENTAL ELEMENTS/MRR FOR SPEC SURF & CLEAN/SPECIAL STRAIGHTENED/EDDY CURRENT TESTED/

RND 1.3750 IN X 24 FT 10 1/2 IN

HEAT: 599135 C : 0.46 Mn: 0.74 P : .017 S : .022 Si: 0.21  
Cu: .08 Ni: 0.04 Cr: 0.06 Mo: .02 Al: .025  
Cb: .001 V : .003 N : .010 Ti: .002

Ni+Cr = 0.10

MICROCLEANLINESS per A (SULF) B (ALUM) C (SILI) D (OXID)  
ASTM E45 METHOD A 2.0T 0.0H 0.0T 0.0H 0.0T 0.0H 1.0T 0.0H

DECARBURIZATION: A.A.D. 0.006\*

PART NUMBER: CSR1045M1375

MATERIAL MEETS AUSTENITIC GRAIN SIZE REQUIREMENT OF 5 OR FINER  
MATERIAL IS 100% SMELT/MRLT AND MANUFACTURED IN THE U.S.A.

PAMELA M GOLON  
NOTARY PUBLIC STATE OF INDIANA  
LAKE COUNTY  
MY COMMISSION EXP. MAR. 25, 2010

*Pamela M. Golon*  
NOTARY

Unless otherwise stated, the steel described herein was manufactured, inspected and tested in accordance with the requirements of the contract or purchase order and conform to those requirements. The steel is free of surface mercury contamination at the time of shipment based on present methods and detection equipment. No mercury, radium or alpha source materials were used in the production of this steel. This steel has not been welded nor repair welded. Heat analyses and test results marked with an asterisk (\*) were reported by a Mittal Steel USA, Indiana Harbor Bar Products approved third party. The "\*" sign at the beginning of any line indicates an amendment to that line from a previously issued report for the same heat/order. All tests were performed by Mittal Steel USA, Indiana Harbor Bar Products, in accordance with the following, unless otherwise specified: Chemistry per ASTM E415 & E1019; Hardenability per ASTM A255 and SAE J406; Macrostructure per ASTM E381 & E1180; Mechanical Properties per ASTM A370, E8 & E23; Hardness per ASTM E10 & E18; and SAE J417; Cleanliness per SAE J421; Microstructure/Microcleanliness per ASTM E3, E45, E112 & E1077, J419 & J422, and JIS G0555; NDT per ASNT-TC-1A, Rounding per ASTM E29. Tested per most recent standard, unless otherwise noted. We hereby certify that the heat and/or test results in this report are applicable only to the items described herein, and are correct as contained in the records of the Company. This document shall not be reproduced except in full.

The management system governing the manufacture of this product is ISO/TS 16949:2002 certified, Certificate No. 38325; ISO 14001:1996 certified, Certificate No. 36274 and A2LA accredited in the fields of: Chemical, Mechanical and Environmental Testing - Certificate Nos. 111.01, 111.02 and 111.03

*Kevin R. Oberembit*  
Kevin R. Oberembit  
Manager - Quality Department



640 Lavoy Road  
Erie, MI 48133  
Phone: 734/848-2915 Fax: 734/848-8734

# CERTIFICATE OF *B7376* ANALYSIS

CUSTOMER ORDER NO: 13497	CERTIFICATION NO: 22-123107	SHIPPER NO: 22-123107	CERTIFIED DATE: 09/29/05
CUSTOMER PART NO: P2281H00	DH	SIZE: .1360 x 4.4370 x COIL	GRADE: SAE J403 1050
CUSTOMER:  PRESTIGE STAMPING INC. **  P O BOX 1086  WARREN MI 480901086		COATING SPECIFICATION: MELTED AND MANUFACTURED IN THE U.S.A.	

ATTENTION:

~~All units of measurement for chemistry are in weight percent.~~

COIL NO.	HEAT NUMBER	CHEMISTRY AND MECHANICAL PROPERTIES
EP5703	C34508	C = 0.510 MN= 0.710 P= 0.009 S = 0.003 SI= 0.030 AL= 0.038 COMMENT: ** MILL CERTIFICATION WITH LOAD **

## RECEIVED

OCT 03 2005

*JA*

THE ABOVE MECHANICAL AND CHEMICAL ANALYSES WERE SUPPLIED  
BY THE PRODUCING MILL OR TESTED ON OUR OWN EQUIPMENT.  
Form No. FQC 001 Rev. 2

Agent for Heidman Steel Products, Inc.

# HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17642

Invoice No. K09860

Invoice Date 01/25/07

Sales Order K09860

Cert No Inv Line No Item No

Quantity Lot No

Assembly No

Haydon PO

28469 70000 PTF113400

35 AJ801A

Heat 388570

A44772

# INSPECTION CERTIFICATE

SET LOT NO. AJ801A

Specification	Quantity
ASTM A490 Type 1 ASTM A563 Grade DH ASTM F436 Type 1	4,631 pcs.
Size 1-1/8 UNC X 4	

**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

**BOLT LOT NO.** AJ801

Date: Mar. 23, '06

Spec.	Mechanical Property of Full Size Bolts				Heat Treatment *F (°C)	IDENTIFICATION	Chemical Composition %									
	Tensile Strength		Proof Load 91550 (Length Method)	Hardness HRC			C x 100 x 1000	Si x 100 x 1000	Mn x 100 x 1000	P x 1000 x 1000	S x 1000 x 1000	Cu x 100 x 1000	Ni x 100 x 100	Cr x 100 x 100	Mo x 100 x 10,000	B
	Load (lbf)	Position of fracture														
	11450		Max.			30										
	132000	Part of Screw	+/- 0.0005 in.			48				Max. 40	Max. 40					
Average 8 pcs	127275	Part of Screw	ALL PASS	35.1	1580	388570	41	22	91	12	13	10	5	89	19	1

**NUT LOT NO.** AI411

Spec.	Hardness (HRC)	Hardness After 24 hr x 1000° F HRB	Min. HRB 89	Proof Load (Lbf)	Heat Treatment *F (°C)	IDENTIFICATION	Chemical Composition %									
							C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100		
															Quench	Temper
	24 - 38			133600	800		20									
	28.7	---	---	ALL PASS	1211		43	21	70	12	29	20	7	12		

**WASHER LOT NO.** WB7377

Spec.	Hardness (HRC)	Hardness 38 - 45	Min. 41.5	Proof Load (Lbf)	Heat Treatment *F (°C)	IDENTIFICATION	Chemical Composition %									
							C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100		
															Quench	Temper
	38 - 45			133600	800		51	1	75	1.1	40	50	Max.	50	1	1
	41.5	---	---	ALL PASS	1211		43	21	70	12	29	20	7	12		

Material used for the bolt, nut and washer were melted & manufactured in the USA. The product was manufactured in the USA to ASTM specifications. The bolt and nut are manufactured by Unytite. We hereby certify that the material described has been manufactured and inspected satisfactory with requirement of the above specification.

JEAN MARGHERIO  
 OFFICIAL SEAL  
 NOTARY PUBLIC STATE OF ILLINOIS  
 MY COMMISSION EXPIRES 10/18/09

03 28-06  
 Chief of Quality Assurance Section

Thread Accuracy (Bolt & Nut)	REMARKS
Bolt ASME B1.1 Class 2A	THESE BOLTS HAVE BEEN MAGNETIC PARTICLE INSPECTION IN ACCORDANCE WITH THE REQUIREMENTS OF SPECIFICATION ASTM A490
Nut ANSI B1.1 Class 2B	


 CHARTER  
STEEL

# CHARTER STEEL

**CHARTER STEEL TEST REPORT**  
 Reverse Has Text And Codes

 A Division of  
 Charter Manufacturing Company, Inc.

 1658 Cold Springs Road  
 Saukville, Wisconsin 53080

(262) 268-2400

1-800-437-8789

FAX (262) 268-2570

**UNYTITE, INC.**  
**ONE UNYTITE DRIVE**  
**PERU, IL 61354-**  
**Attn: ATTEN: JEAN MARGHERIO**

Cust. P.O.:	32109
Cust Part#:	C4140SC1.0953S
Charter Sales Order:	196011
Heat #:	388570
Ship Lot #:	471183
Grade#:	4140 A SK FG RHQ
Process:	AN + SAIP
Finish Size:	1.095

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed below and on the reverse side, and that it satisfies those requirements.

**Test Results of Heat Lot# 388570**

LAB CODE: 7388

Chemistry	C	MN	P	S	SI	NI	CR	MO	CU	SN	V
Wt%	0.41	0.91	0.012	0.013	0.220	0.05	0.89	0.19	0.10	0.006	0.001

	AL	N	B	TI	NB
	0.023	0.0060	0.0001	0.001	0.002

CHEM. DEVIATION EXT.-GREEN = N/R

**Test Results of Rolling Lot # 326576**

QC DEVIATION EXT.-GREEN = N/R

**Test Results of Processing Lot # 471183**

	# of Tests	Min Value	Max Value	Mean Value
TENSILE (KSI)	1	86.6	86.6	86.6
REDUCTION OF AREA (%)	1	64	64	64
ROCKWELL B (HRBW)	1	92	92	92
WIRE SIZE (Inches)	12	1.094	1.094	1.094
WIRE OUT OF ROUND (Inches)	12	0.000	0.001	0.001

 TENSILE LAB = 0358-02  
 RA LAB = 0358-02  
 RB LAB = 0358-02

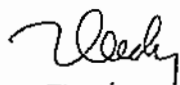
 NUM DECARB = 4      FREE FERRITE DECARB = 0.000      FREE FERR & PARTIAL DECARB = 0.000  
 CP SPHERO % LAB = 0358-02      NUM SPHERO = 4      SPHERODIZATION (%) = 84.4  
 QC DEVIATION EXT.-PROCESSED = N/R

 Specifications: Meets customer specifications with any applicable Charter Steel exceptions for the following customer documents:  
 Customer Document = UNYTITE RMS-001      Revision = 4      Dated = 23-AUG-2002

 Charter Steel  
 Saukville, WI, USA

Fax number: ( ) -

Rem: Load1,Mail0,Fax0


  
 Tim Leahy  
 Manager of Quality Assurance  
 11/27/2005

The following statements are applicable to the material described on the front of this Test Report:

1. Except as noted, the steel supplied for this order was melted, rolled and processed in the United States.
2. Mercury was not used during the manufacture of this product; nor was the steel contaminated with mercury during processing.
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0358-02	8171	CSR/ CSPD	Charter Steel Rolling/ Processing Division	1658 Cold Springs Road, Saukville, WI 53080
0358-03	123633	P4	Charter Steel Ohio Processing Division	6255 US Highway 23, Risingsun, OH 43457
0358-04	125544	CSC	Charter Steel Cleveland	4300 E. 49 <sup>th</sup> St., Cuyahoga Heights, OH 44125-1004
*	*	-	Subcontracted test performed by laboratory not in Charter Steel system	

5. When run by a Charter Steel laboratory, the following tests were performed according to the latest revisions of the specifications listed below, as noted in the Charter Steel Laboratory Quality Manual:

Test	Possible Laboratory	Specification
Chemistry Analysis	CSMD	ASTM E415; ASTM E1019
Macroetch	CSMD	ASTM E381
Hardenability (Jominy)	CSMD	ASTM A255
Grain Size	CSMD	ASTM E112
Tensile Test	CSR/ CSPD, P4, CSC	ASTM E8; ASTM A370
Rockwell Hardness	CSR/ CSPD, P4, CSC	ASTM E18; ASTM A370
Microstructure (spheroidization)	CSR/ CSPD, P4	ASTM A892
Cleanliness	CSR/ CSPD, CSC	ASTM E45

Charter Steel has been accredited to perform all of the above tests by the American Association for Laboratory Accreditation (A2LA). These accreditations expire 01/31/07.

All other test results associated with a Charter Steel laboratory that appear on the front of this report, if any, were performed according to documented procedures developed by Charter Steel and are not accredited by A2LA.

6. The test results on the front of this report are the true values measured on the samples taken from the production lot. They do not apply to any other sample.
7. This test report cannot be reproduced or distributed except in full without the written permission of Charter Steel. The primary customer whose name and address appear on the front of this form may reproduce this test report, subject to the following restrictions:
  - It may be distributed only to their customers
  - Both sides of all pages must be reproduced in full
8. This certification is given subject to the terms and conditions of sale provided in Charter Steel's acknowledgment (designated by our Purchase Order number) to the customer's purchase order. Both Purchase Order numbers appear on the front page of this Report.
9. Where the customer has provided a specification, the results on the front of this test report conform to that specification unless otherwise noted on this test report.





M518542

P.O Box 64189  
1678 Red Rock Road  
Saint Paul, Minnesota 55164

**CERTIFIED TEST REPORT**

Heat #: S72504  
Size: 1 3/8  
Product: Round Bar  
Grade: C1045M23FC  
Date Rolled: 09-28-2005  
P.O: 32454  
M.O #: 508444606  
B1045SC1.3750, lgth 24\*10"

**CHEMICAL ANALYSIS (WT %)**

C	Mn	P	S	Si	Sn	Cu	Ni	Cr	Mo	Cb	V	Co	Al	Ti	Ca ppm	N ppm
0.43	.70	0.012	0.029	0.21	0.002	0.2	0.07	0.12	0.02	0.001	0.026	0.009	0.002	0.003	18	35

MATERIAL 100% MELTED AND ROLLED IN THE USA. MANUFACTURING PROCESSES FOR THIS STEEL, WHICH MAY INCLUDE SCRAP MELTED IN AN ELECTRIC ARC FURNACE AND HOT ROLLING, HAVE BEEN PERFORMED AT GERDAU AMERISTEEL MINNESOTA, 1678 RED ROCK ROAD, SAINT PAUL MINNESOTA, USA. ALL PRODUCT PRODUCED FROM STRAND CAST BILLETS. NO WELD REPAIRMENT PERFORMED. STEEL NOT EXPOSED TO MERCURY OR ANY LIQUID ALLOY WHICH IS LIQUID AT AMBIENT TEMPERATURES DURING PROCESSING OR WHILE IN GERDAU AMERISTEEL MINNESOTA POSSESSION.

**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

**MECHANICAL TEST REPORT**

SPECIMEN YIELD (Kips) YIELD TENSILE TENSILE GAUGE % ELONG. %  
AREA (in^2) (Ksi) (Kips) (Ksi) LENGTH (in) BEND R.A.

**Additional Specifications/Comments:**

A576-90b (2000)  
A29/A29M-05

Quality Program Manual Rev. I, dtd 6/0/05

Grain Size: Fine	Reduction Ratio: 20.4:1	C.E Per:	As Rolled surface Hardness
Coding:	D.I: 1.29 in. Ms: 626.8 Deg F.	C.E:	HBW HRC
			Test 1: Test 2:

**CHARPY IMPACT TEST**

Temp (F)	Test 1	Test 2
ft-lb 1		
ft-lb 2		
ft-lb 3		

ASTM E45 is not a laboratory accredited test.

Micro Clean Average									
At:	Ah:	Bt:	Bh:	Ct:	Ch:	Dt:	Dh:	S-Rating	O-Rating:
Macro Etch :									

**ASTM Test Method**

Accredited to:	ASTM A370	ASTM E8	ASTM E10	ASTM E18	ASTM E23	ASTM E112	ASTM E255	ASTM E290	ASTM E415	ASTM E1019
ISO 17025	X	X	X	X				X	X	X
subcontractor (ISO 170 25)										

The above results relate only to the items tested.

Chemical tests performed in accordance with ASTM E415 and E1019. Mechanical tests performed in accordance to ASTM E8,E10, E18, E290 and A370. All other tests performed in accordance with the requirements of applicable specifications unless otherwise noted above. We hereby certify that the above test results are representative of those contained in the records of the company.

Any modification to this certificate as provided by Gerdau Ameristeel - Minnesota without the expressed written consent of Gerdau Ameristeel - Minnesota negates the validity of this test report. This report shall not be reproduced except in full, without the expressed written consent of Gerdau Ameristeel Minnesota. Gerdau Ameristeel- Minnesota is not responsible for the inability of this material to meet specific applications.

SIGNED:

DATE: 02-21-2006

APPROVAL:

**QA Approval**

*K. Wong*

**Ken Wong**

X Gerdau Ameristeel Minnesota, A2LA Certification #1056-01 Exp. 6/30/06

\* Denotes Testing By Sub-Contractor:  
Metallurgical Services Inc., A2LA Certification #510-01 Exp. 12/31/06  
Stork Twin City Testing, A2LA Certification #1479-03 Exp 2/28/06

Measurement of uncertainty for this test is available upon request.

**DEBRA L. KARESCH**  
Notary Public - Minnesota  
My Commission Expires Jan 31, 2010

THIS DAY February 21, 2006  
*Debra Karesch*  
(NOTARY PUBLIC)

THIS CERTIFICATE IS NOTARIZED ONLY WHEN REQUESTED.



640 Lavoy Road  
Erie, MI 48133  
Phone: 734/848-2915

Fax: 734/848-8734

B7377

## CERTIFICATE OF ANALYSIS

M.11/cent

CUSTOMER ORDER No: 13477	CERTIFICATION No: 1 -328375	SHIPPER No: 1 -328375	CERTIFIED DATE: 09/29/05
CUSTOMER PART No: P2281H00	AD	Size: .1360 x 4.4370 x COIL	
CUSTOMER:  PRESTIGE STAMPING INC. **  P O BOX 1086  WARREN MI 480901086		GRADE: SAE J403 1050	
		GRADE SPECIFICATION MELTED AND MANUFACTURED IN THE U.S.A.	

## ATTENTION:

~~All units of measurement for chemistry are in weight percent.~~

COIL NO.	HEAT NUMBER	CHEMISTRY AND MECHANICAL PROPERTIES
ET6101	30529130	C = 0.510 MN= 0.750 P = 0.011 S = 0.001 SI= 0.240 AL= 0.030

# RECEIVED

OCT 03 2005

*JA*

THE ABOVE MECHANICAL AND CHEMICAL ANALYSES WERE SUPPLIED  
BY THE PRODUCING MILL OR TESTED ON OUR OWN EQUIPMENT.  
Form No. FQC 001 Rev. 2

*Amo*  
Agent for Heldtman Steel Products, Inc.

HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17642

Invoice No. K09860

Invoice Date 01/25/07

Sales Order K09860

Cert No Inv Line No Item No

Quantity Lot No

Heat

Assembly No

Haydon PO  
A44772

30003 . 80000 PTF113375

55 AZ001A

423860

# INSPECTION CERTIFICATE

SET LOT NO. AZ001A

UNYTITE, INC.

One Unytite Drive  
Peru, Illinois 61354

815-224-2221 — FAX # 815-224-3434



Specification	Size	Quantity
ASTM A490 F2280 Type 1		
ASTM A563 Grade DH	1-1/8 UNC X 3-3/4	2,754 pcs.
ASTM F436 Type 1		

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

BOLT LOT NO. AZ001

Date: Sep. 22, '06

Mechanical Property of Full Size Bolts	Chemical Composition %																		
	Tensile Strength	Proof Load 91550 lbf. (length Method)	HRC	Heat Treatment *F (°C)	IDENTIFICATION						C	Si	Mn	P	S	Cu	Ni	Cr	Mo
Load (lbf)	114450	Max.		Quench	Temper	Min.	800	Heat No.	423860	41	24	91	1.1	1.2	8	5	95	17	1
Position of fracture	132000	Part of Screw	±/- 0.0005 in.																
Average 8 pcs	124350	Part of Screw	ALL PASS	1580	1004	1004	1580	423860	41	24	91	1.1	1.2	8	5	95	17	1	

NUT LOT NO. AW632

Mechanical Property of Full Size Nuts	Chemical Composition %																
	Hardness After 24 hr x 1000° F HRB	Proof Load (lbf)	HRC	Heat Treatment *F (°C)	IDENTIFICATION						C	Si	Mn	P	S	Cu	Ni
Load (lbf)	133600	Max.		Quench	Temper	Min.	850	Heat No.	590296	45	19	67	10	22	20	8	10
Position of fracture	133600	Part of Nut	±/- 0.0005 in.														
Average 8 pcs	133600	Part of Nut	ALL PASS	1562	1049	1049	1562	590296	45	19	67	10	22	20	8	10	

WASHER LOT NO. WB7499

Mechanical Property of Full Size Washers	Chemical Composition %																	
	Hardness (HRC)	Proof Load (lbf)	HRC	Heat Treatment *F (°C)	IDENTIFICATION						C	Si	Mn	P	S	Cu	Ni	Cr
Load (lbf)	38-45	Max.		Quench	Temper	Min.	850	Heat No.	20532100	51	25	77	14	40	50	1	1	1
Position of fracture	38-45	Part of Washer	±/- 0.0005 in.															
Average 8 pcs	42.0	Part of Washer	ALL PASS	1562	1049	1049	1562	20532100	51	25	77	14	40	50	1	1	1	

Material used for the bolt, nut and washer were melted & manufactured in the USA. The product was manufactured in the USA to ASTM specifications. The bolt and nut are manufactured by Unytite. We hereby certify that the material described has been manufactured and inspected satisfactory with requirement of the above specification.

Thread Accuracy (Bolt & Nut)	REMARKS
Bolt	ASME B1.1 Class 2A
Nut	ASME B1.1 Class 2B

Fastener Tension	Fastener Tension
Spec. (lbf)	Min. 84000
Mean / 5 sets.	102210
Standard Deviation	2209

Chief of Quality Assurance Section

*[Signature]*

09-29-06

NOTARY PUBLIC STATE OF ILLINOIS  
OFFICIAL SEAL  
JEAN MARGHERIO  
MY COMMISSION EXPIRES: 07/18/09

LOAD



# CHARTER STEEL

## CHARTER STEEL TEST REPORT Reverse Has Text And Codes

A Division of  
Charter Manufacturing Company, Inc.

1658 Cold Springs Road  
Saukville, Wisconsin 53080  
(262) 268-2400  
1-800-437-8789  
FAX (262) 268-2570

UNYTITE, INC.  
ONE UNYTITE DRIVE  
PERU, IL 61354-  
Attn: ATTEN: JEAN MARGHERIO

Cust. P.O.	33617
Cust Part#	C4140SC1.0953S
Charter Sales Order	212944
Heat #	423860
Ship Lot #	489313
Grade#	4140 A SK FG RHQ
Process	SA + SAIP
Finish Size	1.095

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed below and on the reverse side, and that it satisfies those requirements.

### Test Results of Heat Lot# 423860

LAB CODE: 7388

Chemistry	C	MN	P	S	SI	NI	CR	MO	CU	SN	V
Wt%	0.41	0.91	0.011	0.012	0.240	0.05	0.95	0.17	0.08	0.008	0.001

AL	N	B	TI	NB
0.025	0.0060	0.0001	0.001	0.003

CHEM. DEVIATION EXT.-GREEN = N/R

### Test Results of Rolling Lot # 340919

QC DEVIATION EXT.-GREEN = N/R

### Test Results of Processing Lot # 489313

	# of Tests	Min Value	Max Value	Mean Value
TENSILE (KSI)	3	80.9	82.3	81.5
REDUCTION OF AREA (%)	3	61	68	65
ROCKWELL B (HRBW)	3	89	91	90
WIRE SIZE (Inches)	20	1.093	1.094	1.093
WIRE OUT OF ROUND (Inches)	20	0.000	0.001	0.000

TENSILE LAB = 0358-02  
RA LAB = 0358-02  
RB LAB = 0358-02

NUM DECARB = 3      FREE FERRITE DECARB = 0.000      FREE FERR & PARTIAL DECARB = 0.000  
CP SPHERO % LAB = 0358-02      NUM SPHERO = 3      SPHERODIZATION (%) = 85.0  
QC DEVIATION EXT.-PROCESSED = N/R

Specifications: Meets customer specifications with any applicable Charter Steel exceptions for the following customer documents:  
Customer Document = UNYTITE RMS-001      Revision = 4      Dated = 23-AUG-2002

Charter Steel  
Saukville, WI, USA

Fax number: ( )      Rem: Load1,Mail0,Fax0



Tim Leahy  
Manager of Quality Assurance  
06/20/2006

The following statements are applicable to the material described on the front of this Test Report:

1. Except as noted, the steel supplied for this order was melted, rolled and processed in the United States.
2. Mercury was not used during the manufacture of this product; nor was the steel contaminated with mercury during processing.
3. Unless directed by the customer, there are no welds in any of the coils produced for this order.
4. The laboratory that generated the analytical or test results can be identified by the following key:

Certificate Number	Lab Code	Laboratory		Address
0358-01	7388	CSMD	Charter Steel Melting Division	1658 Cold Springs Road, Saukville, WI 53080
0358-02	8171	CSRD/ CSPD	Charter Steel Rolling/ Processing Division	1658 Cold Springs Road, Saukville, WI 53080
0358-03	123633	P4	Charter Steel Ohio Processing Division	6255 US Highway 23, Risingsun, OH 43457
0358-04	125544	CSC	Charter Steel Cleveland	4300 E. 49 <sup>th</sup> St., Cuyahoga Heights, OH 44125-1004
		--	Subcontracted test performed by laboratory not in Charter Steel system	

5. When run by a Charter Steel laboratory, the following tests were performed according to the latest revisions of the specifications listed below, as noted in the Charter Steel Laboratory Quality Manual:

Test	Possible Laboratory	Specification
Chemistry Analysis	CSMD	ASTM E415; ASTM E1019
Macroetch	CSMD	ASTM E381
Hardenability (Jominy)	CSMD	ASTM A255; JIS G0561
Grain Size	CSMD	ASTM E112
Tensile Test	CSRD/CSPD, P4, CSC	ASTM E8; ASTM A370
Rockwell Hardness	CSRD/CSPD, P4, CSC	ASTM E18; ASTM A370
Microstructure (spheroidization)	CSRD/CSPD, P4	ASTM A892
Cleanliness	CSRD/CSPD, CSC	ASTM E45

Charter Steel has been accredited to perform all of the above tests by the American Association for Laboratory Accreditation (A2LA). These accreditations expire 01/31/07.

All other test results associated with a Charter Steel laboratory that appear on the front of this report, if any, were performed according to documented procedures developed by Charter Steel and are not accredited by A2LA.

6. The test results on the front of this report are the true values measured on the samples taken from the production lot. They do not apply to any other sample.
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  - Both sides of all pages must be reproduced in full
8. This certification is given subject to the terms and conditions of sale provided in Charter Steel's acknowledgment (designated by our Purchase Order number) to the customer's purchase order. Both Purchase Order numbers appear on the front page of this Report.
9. Where the customer has provided a specification, the results on the front of this test report conform to that specification unless otherwise noted on this test report.



# TEST REPORT

# MITTAL

REQ. JOB, CONTRACT NO.

PURCHASE ORDER NO.  
32948

V  
E  
N  
D  
O  
R

MITTAL STEEL USA  
INDIANA HARBOR BAR PRODUCTS  
3300 DICKEY ROAD  
EAST CHICAGO, INDIANA 46312

SHIPPER'S NO.

BILL ORDER NO.

214863

SHIPMENT DATE

01/23/2006

TEST REPORT TO:

UNYTITE

SHIP TO:

UNYTITE, INC

1 UNYTITE DR

ONE UNYTITE DRIVE

PERU IL

61354

PERU IL, 61354

CMS (REG TM) SQ HOT ROLLED ROUNDS SAE 1045 MOD /RMS-009 (03/09/01) 5 / FINE  
GRAIN/CWQ/RESTRICTED CHEMICAL REQ/RESTRICTED MAX INCIDENTAL ELEMENTS/MRR FOR  
SPEC SURF & CLEAN/SPECIAL STRAIGHTENED/EDDY CURRENT TESTED/

RND 1.3750 IN X 24 FT 10 1/2 IN

HEAT: 590296 C : 0.45 Mn: 0.67 P : .010 S : .022 Si: 0.19  
Cu: .20 Ni: 0.08 Cr: 0.10 Mo: .03 Al: .023  
Cb: .001 V : .002 N : .009 Ti: .001

Ni+Cr = 0.18

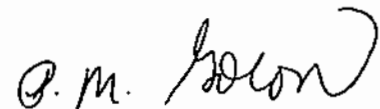
MICROCLEANLINESS per A (SULF) B (ALUM) C (SILI) D (OXID)  
ASTM E45 METHOD A 2.0T 0.0H 0.0T 0.0H 0.0T 0.0H 1.0T 0.0H

DECARBURIZATION: A.A.D. 0.006"

PART NUMBER: CSRB1045M1375

MATERIAL MEETS AUSTENITIC GRAIN SIZE REQUIREMENT OF 5 OR FINER  
MATERIAL IS 100% SMELT/MELT AND MANUFACTURED IN THE U.S.A.

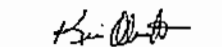
PAMELA M COLON  
NOTARY PUBLIC STATE OF INDIANA  
LAKE COUNTY  
MY COMMISSION EXP. MAR. 25, 2010



NOTARY

Unless otherwise stated, the steel described herein was manufactured, inspected and tested in accordance with the requirements of the contract or purchase order and conform to those requirements. The steel is free of surface mercury contamination at the time of shipment based on present methods and detection equipment. No mercury, radium or alpha source materials were used in the production of this steel. This steel has not been welded nor repair welded. Heat analyses and test results marked with an asterisk (\*) were reported by a Mittal Steel USA, Indiana Harbor Bar Products approved third party. The "+" sign at the beginning of any line indicates an amendment to that line from a previously issued report for the same heat/order. All tests were performed by Mittal Steel USA, Indiana Harbor Bar Products. In accordance with the following, unless otherwise specified: Chemistry per ASTM E415 & E1019; Hardenability per ASTM A255 and SAE J406; Macrostructure per ASTM E381 & E1180; Mechanical Properties per ASTM A370, E8 & E23; Hardness per ASTM E10 & E18; and SAE J417; Cleanliness per SAE J421; Microstructure/Microcleanliness per ASTM E3, E45, E112 & E1077, J419 & J422, and JIS G0555; NDT per ASNT-TC-1A, Rounding per ASTM E29. Tested per most recent standard, unless otherwise noted. We hereby certify that the heat and/or test results in this report are applicable only to the items described herein, and are correct as contained in the records of the Company. This document shall not be reproduced except in full.

The management system governing the manufacture of this product is ISO/TS 16949:2002 certified, Certificate No. 38325; ISO 14001:1996 certified, Certificate No. 36274 and A2LA accredited in the fields of: Chemical, Mechanical and Environmental Testing - Certificate Nos. 111.01, 111.02 and 111.03



Kevin R. Oberembt  
Manager - Quality Department



4400 County Road 59  
Butler, IN 46721  
Phone: 260/868-9980 Fax: 260/868-9977

# CERTIFICATE OF ANALYSIS

CUSTOMER ORDER NO: 13477	CERTIFICATION NO: 8 -285135	SHIPPER NO: 8 -285135	CERTIFIED DATE: 10/25/05
CUSTOMER PART NO: P2281H00	TLY	SIZE: .1360 x 4.4370 x COIL	GRADE: SAE J403 1050
CUSTOMER:  PRESTIGE STAMPING INC. **  P O BOX 1086  WARREN MI 480901086		COATING SPECIFICATION: MELTED AND MANUFACTURED IN THE U.S.A.	

ATTENTION:

All units of measurement for chemistry are in weight percent.

COIL NO.	HEAT NUMBER	CHEMISTRY AND MECHANICAL PROPERTIES
ET6103	20532100	C = 0.510 MN= 0.770 P = 0.014 S = 0.001 SI= 0.250 AL= 0.020

RECEIVED

OCT 25 2005

*JA*

THE ABOVE MECHANICAL AND CHEMICAL ANALYSES WERE SUPPLIED  
BY THE PRODUCING MILL OR TESTED ON OUR OWN EQUIPMENT.  
Form No. FQC 001 Rev. 2

*Juri Laros*  
Agent for Heidman Steel Products, Inc.



# HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17642

Invoice No. K09860

Invoice Date 01/25/07

Sales Order K09860

Cert No Inv Line No Item No

Quantity Lot No

Assembly No

Haydon PO

30299 90000 PTF113350

15 AX941A

Heat 423860

A44772

# INSPECTION CERTIFICATE

AX941A

SET LOT NO.

UNYITE, INC.

One Unyite Drive  
Peru, Illinois 61354

815-224-2221 — FAX # 815-224-3434



Specification	Size	Quantity
ASTM A490 F2280 Type 1	1-1/8 UNC X 3-1/2	7,355 pcs.
ASTM A563 Grade DH		
ASTM F436 Type 1		

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

BOLT LOT NO. AX941

Date: Sep. 22, '06

Mechanical Property of Full Size Bolts				Chemical Composition %											
Tensile Strength	Proof Load 91550 (Length Method)	Hardness		Heat Treatment °F (°C)	IDENTIFICATION	C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100	Mo x 100	B x 10,000
		HRC	Temper												
Spec. 114450	Max. +/- 0.0005 in.			Quench		30			Max. 40	Max. 40					
132000	Part of Screw			Temper		Heat No.	48								
Average 122050	Part of Screw	35.1	1580	1004	423860	41	24	91	11	12	8	5	95	17	1

NUT LOT NO. AW632

Mechanical Property of Full Size Nuts				Chemical Composition %									
Hardness After 24 hr x 1000° F HRB	Proof Load (Lbf)	Heat Treatment °F (°C)		IDENTIFICATION	C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100	
		Quench	Temper										
Spec. 24-38	133600		850		20			Max. 40	Max. 50				
Mean/5 pcs. 28.1	ALL PASS	1562	1049		Heat No.	55	60	67	10	22	20	8	10

WASHER LOT NO. WB7499

Mechanical Property of Full Size Washers				Chemical Composition %									
Hardness (HRC)	Proof Load (Lbf)	Heat Treatment °F (°C)		IDENTIFICATION	C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100	
		Quench	Temper										
Spec. 38-45								Max. 40	Max. 50				
Mean/5 Pcs. 42.0	20532100	51	25		77	14	1						

Material used for the bolt, nut and washer were melted & manufactured in the USA. The product was manufactured in the USA to ASTM specifications. The bolt and nut are manufactured by Unyite. We hereby certify that the material described has been manufactured and inspected satisfactory with requirement of the above specification.

JEAN MARGHERIO  
608 JOLLA DRIVE  
JOLIET, ILLINOIS 61731  
OFFICIAL SEAL  
COMMISSIONER OF QUALITY ASSURANCE SECTION

Chief of Quality Assurance Section

Thread Accuracy (Bolt & Nut)	REMARKS
Bolt ASME B1.1 Class 2A	THESE BOLTS HAVE BEEN MAGNETIC PARTICLE INSPECTION IN ACCORDANCE WITH THE REQUIREMENTS OF SPECIFICATION ASTM A490
Nut ASME B1.1 Class 2B	

Fastener Tension	Fastener Tension
Spec. (lbf)	Min. 84000.
Mean / 5 sets.	98398
Standard Deviation	4282

LOAD



# CHARTER STEEL

## CHARTER STEEL TEST REPORT Reverse Has Text And Codes

A Division of  
Charter Manufacturing Company, Inc.

1658 Cold Springs Road  
Saukville, Wisconsin 53080  
(262) 268-2400  
1-800-437-8789  
FAX (262) 268-2570

UNYTITE, INC.  
ONE UNYTITE DRIVE  
PERU, IL 61354-  
Attn: ATTEN: JEAN MARGHERIO

Cust. P.O.	33617
Cust. Part#	C4140SC1.0953S
Charter Sales Order	212944
Heat #	423860
Ship Lot #	489313
Grade#	4140 A SK FG RHQ
Process	SA + SAIP
Finish Size	1.095

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed below and on the reverse side, and that it satisfies those requirements.

Test Results of Heat Lot# 423860

LAB CODE: 7388

Chemistry	C	MN	P	S	SI	NI	CR	MO	CU	SN	V
Wt%	0.41	0.91	0.011	0.012	0.240	0.05	0.95	0.17	0.08	0.008	0.001
	AL	N	B	TI	NB						
	0.025	0.0060	0.0001	0.001	0.003						

CHEM. DEVIATION EXT.-GREEN = N/R

Test Results of Rolling Lot # 340919

QC DEVIATION EXT.-GREEN = N/R

Test Results of Processing Lot # 489313

	# of Tests	Min Value	Max Value	Mean Value	
TENSILE (KSI)	3	80.9	82.3	81.5	TENSILE LAB = 0358-02
REDUCTION OF AREA (%)	3	61	68	65	RA LAB = 0358-02
ROCKWELL B (HRBW)	3	89	91	90	RB LAB = 0358-02
WIRE SIZE (Inches)	20	1.093	1.094	1.093	
WIRE OUT OF ROUND (Inches)	20	0.000	0.001	0.000	

NUM DECARB = 3      FREE FERRITE DECARB = 0.000      FREE FERR & PARTIAL DECARB = 0.000  
CP SPHERO % LAB = 0358-02      NUM SPHERO = 3      SPHERODIZATION (%) = 85.0  
QC DEVIATION EXT.-PROCESSED = N/R

Specifications: Meets customer specifications with any applicable Charter Steel exceptions for the following customer documents:  
Customer Document = UNYTITE RMS-001      Revision = 4      Dated = 23-AUG-2002

Charter Steel  
Saukville, WI, USA

Fax number: ( )      Rem: Load 1, Mail 0, Fax 0



Tim Leahy  
Manager of Quality Assurance  
06/20/2006

The following statements are applicable to the material described on the front of this Test Report:

1. Except as noted, the steel supplied for this order was melted, rolled and processed in the United States.
2. Mercury was not used during the manufacture of this product; nor was the steel contaminated with mercury during processing.
3. Unless directed by the customer, there are no welds in any of the coils produced for this order.
4. The laboratory that generated the analytical or test results can be identified by the following key:

Certificate Number	Lab Code	Laboratory		Address
0358-01	7388	<b>CSMD</b>	Charter Steel Melting Division	1658 Cold Springs Road, Saukville, WI 53080
0358-02	8171	<b>CSR/D/ CSPD</b>	Charter Steel Rolling/ Processing Division	1658 Cold Springs Road, Saukville, WI 53080
0358-03	123633	<b>P4</b>	Charter Steel Ohio Processing Division	6255 US Highway 23, Risingsun, OH 43457
0358-04	125544	<b>CSC</b>	Charter Steel Cleveland	4300 E. 49 <sup>th</sup> St., Cuyahoga Heights, OH 44125-1004
*	*	--	Subcontracted test performed by laboratory not in Charter Steel system	

5. When run by a Charter Steel laboratory, the following tests were performed according to the latest revisions of the specifications listed below, as noted in the Charter Steel Laboratory Quality Manual:

Test	Possible Laboratory	Specification
Chemistry Analysis	CSMD	ASTM E415; ASTM E1019
Macroetch	CSMD	ASTM E381
Hardenability (Jominy)	CSMD	ASTM A255; JIS G0561
Grain Size	CSMD	ASTM E112
Tensile Test	CSR/D/CSPD, P4, CSC	ASTM E8; ASTM A370
Rockwell Hardness	CSR/D/CSPD, P4, CSC	ASTM E18; ASTM A370
Microstructure (spheroidization)	CSR/D/CSPD, P4	ASTM A892
Cleanliness	CSR/D/CSPD, CSC	ASTM E45

Charter Steel has been accredited to perform all of the above tests by the American Association for Laboratory Accreditation (A2LA). These accreditations expire 01/31/07.

All other test results associated with a Charter Steel laboratory that appear on the front of this report, if any, were performed according to documented procedures developed by Charter Steel and are not accredited by A2LA.

6. The test results on the front of this report are the true values measured on the samples taken from the production lot. They do not apply to any other sample.
7. This test report cannot be reproduced or distributed except in full without the written permission of Charter Steel. The primary customer whose name and address appear on the front of this form may reproduce this test report, subject to the following restrictions:
  - It may be distributed only to their customers
  - Both sides of all pages must be reproduced in full
8. This certification is given subject to the terms and conditions of sale provided in Charter Steel's acknowledgment (designated by our Purchase Order number) to the customer's purchase order. Both Purchase Order numbers appear on the front page of this Report.
9. Where the customer has provided a specification, the results on the front of this test report conform to that specification unless otherwise noted on this test report.



# TEST REPORT

# MITTAL

REQ. JOB, CONTACT NO.		PURCHASE ORDER NO. 32948	
V E N D O R  MITTAL STEEL USA INDIANA HARBOR BAR PRODUCTS 3300 DICKEY ROAD EAST CHICAGO, INDIANA 46312	SERVER NO.	BILL ORDER NO. 214863	
	REPORT DATE	01/23/2006	

TEST REPORT TO: <b>UNYTITE</b>	SHIP TO: <b>UNYTITE, INC</b>
<b>1 UNYTITE DR</b>	<b>ONE UNYTITE DRIVE</b>
<b>PERU IL 61354</b>	<b>PERU IL, 61354</b>

CMS (REG TM) SQ HOT ROLLED ROUNDS SAK 1045 MOD /RMS-009 (03/09/01) 5 / FINE GRAIN/CWQ/RESTRICTED CHEMICAL REQ/RESTRICTED MAX INCIDENTAL ELEMENTS/MRR FOR SPEC SURF & CLEAN/SPECIAL STRAIGHTENED/EDDY CURRENT TESTED/  
RND 1.3750 IN X 24 FT 10 1/2 IN

HEAT: 590296 C : 0.45 Mn: 0.67 P : .010 S : .022 Si: 0.19  
Cu: .20 Ni: 0.08 Cr: 0.10 Mo: .03 Al: .023  
Cb: .001 V : .002 N : .009 Ti: .001

Ni+Cr = 0.18

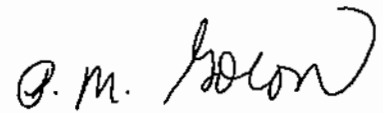
MICROCLEANLINESS per A (SULF) B (ALUM) C (SILI) D (OXID)  
ASTM E45 METHOD A 2.0T 0.0H 0.0T 0.0H 0.0T 0.0H 1.0T 0.0H

DECARBURIZATION: A.A.D. 0.006"

PART NUMBER: CSRB1045M1375

MATERIAL MEETS AUSTENITIC GRAIN SIZE REQUIREMENT OF 5 OR FINER  
MATERIAL IS 100% SMELT/MELT AND MANUFACTURED IN THE U.S.A.

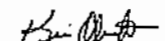
PAMELA M GOLON  
NOTARY PUBLIC STATE OF INDIANA  
LAKE COUNTY  
MY COMMISSION EXP. MAR. 25, 2010



NOTARY

Unless otherwise stated, the steel described herein was manufactured, inspected and tested in accordance with the requirements of the contract or purchase order and conform to those requirements. The steel is free of surface mercury contamination at the time of shipment based on present methods and detection equipment. No mercury, radium or alpha source materials were used in the production of this steel. This steel has not been welded nor repair welded. Heat analyses and test results marked with an asterisk (\*) were reported by a Mittal Steel USA, Indiana Harbor Bar Products approved third party. The "\*" sign at the beginning of any line indicates an amendment to that line from a previously issued report for the same heat/order. All tests were performed by Mittal Steel USA, Indiana Harbor Bar Products, in accordance with the following, unless otherwise specified: Chemistry per ASTM E415 & E1019; Hardenability per ASTM A255 and SAE J406; Macrostructure per ASTM E381 & E1180; Mechanical Properties per ASTM A370, E8 & E23; Hardness per ASTM E10 & E18; and SAE J417; Cleanliness per SAE J421; Microstructure/Microcleanliness per ASTM E3, E45, E112 & E1077, J419 & J422, and JIS G0555; NDT per ASNT-TC-1A, Rounding per ASTM E29. Tested per most recent standard, unless otherwise noted. We hereby certify that the heat and/or test results in this report are applicable only to the items described herein, and are correct as contained in the records of the Company. This document shall not be reproduced except in full.

The management system governing the manufacture of this product is ISO/TS 16949:2002 certified, Certificate No. 38325; ISO 14001:1996 certified, Certificate No. 36274 and A2LA accredited in the fields of: Chemical, Mechanical and Environmental Testing. Certificate Nos. 111.01, 111.02 and 111.03

  
 Kevin R. Oberembt  
 Manager - Quality Department



4400 County Road 59  
 Butler, IN 46721  
 Phone: 260/868-9980 Fax: 260/868-9977

# CERTIFICATE OF ANALYSIS

CUSTOMER ORDER No: 13477	CERTIFICATION No: 8 -285135	SHIPPER No: 8 -285135	CERTIFIED DATE: 10/25/05
CUSTOMER PART No: P2281H00	TLY		SIZE: .1360 x 4.4370 x COIL
CUSTOMER:  <p style="text-align: center;">PRESTIGE STAMPING INC. **</p> <p style="text-align: center;">P O BOX 1086</p> <p style="text-align: center;">WARREN MI 480901086</p>			GRADE: SAE J403 1050
			COATING SPECIFICATION: MELTED AND MANUFACTURED IN THE U.S.A.

ATTENTION:

All units of measurement for chemistry are in weight percent.

COIL NO.	HEAT NUMBER	CHEMISTRY AND MECHANICAL PROPERTIES
ET6103	20532100	C = 0.510 MN= 0.770 P = 0.014 S = 0.001 SI= 0.250 AL= 0.020

RECEIVED

OCT 27 2005

*JA*

THE ABOVE MECHANICAL AND CHEMICAL ANALYSES WERE SUPPLIED BY THE PRODUCING MILL OR TESTED ON OUR OWN EQUIPMENT.  
 Form No. FQC 001 Rev. 2

*Juri Laros*

Agent for Heidman Steel Products, Inc.

# HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17642

Invoice No. K09860

Invoice Date 01/25/07

Sales Order K09860

Cert No Inv Line No Item No

Quantity Lot No

Assembly No Haydon PO

29572 100000 PTF113325

50 AV831A

Heat 415550

A44772

LOAD


 CHARTER  
STEEL

# CHARTER STEEL

## CHARTER STEEL TEST REPORT

Reverse Has Text And Codes

A Division of  
Charter Manufacturing Company, Inc.

1658 Cold Springs Road  
Saukville, Wisconsin 53080  
(262) 268-2400  
1-800-437-8789  
FAX (262) 268-2570

UNYTITE, INC.  
ONE UNYTITE DRIVE  
PERU, IL 61354-  
Attn: ATTEN: JEAN MARGHERIO

Cust. P.O.	33617
Cust. Part#	C4140SC1.0953S
Charter Sales Order	211890
Heat #	415550
Ship Lot #	486025
Grade#	4140 A SK FG RHQ
Process	SA + SAIP
Finish Size	1.095

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed below and on the reverse side, and that it satisfies those requirements.

### Test Results of Heat Lot# 415550

LAB CODE: 7388

Chemistry	C	MN	P	S	SI	NI	CR	MO	CU	SN	V
Wt%	0.39	0.94	0.011	0.009	0.260	0.05	0.87	0.21	0.08	0.007	0.001

AL	N	B	TI	NB
0.023	0.0070	0.0001	0.001	0.002

CHEM. DEVIATION EXT.-GREEN = N/R

### Test Results of Rolling Lot # 337665

QC DEVIATION EXT.-GREEN = N/R

### Test Results of Processing Lot # 486025

	# of Tests	Min Value	Max Value	Mean Value
TENSILE (KSI)	3	81.5	82.0	81.7
REDUCTION OF AREA (%)	3	56	67	62
ROCKWELL B (HRBW)	3	89	90	89
WIRE SIZE (Inches)	22	1.093	1.094	1.093
WIRE OUT OF ROUND (Inches)	22	0.000	0.001	0.000

TENSILE LAB = 0358-02  
RA LAB = 0358-02  
RB LAB = 0358-02

NUM DECARB = 3      FREE FERRITE DECARB = 0.000      FREE FERR & PARTIAL DECARB = 0.002  
CP SPHERO % LAB = 0358-02      NUM SPHERO = 3      SPHERODIZATION (%) = 84.2  
QC DEVIATION EXT.-PROCESSED = N/R

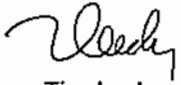
Specifications: Meets customer specifications with any applicable Charter Steel exceptions for the following customer documents:  
Customer Document = UNYTITE RMS-001      Revision = 4      Dated = 23-AUG-2002

Charter Steel  
Saukville, WI, USA

Fax number: ( ) -      Rem: Load1,Mail0,Fax0



Page: 1 of 1

  
Tim Leahy  
Manager of Quality Assurance  
05/12/2006



The following statements are applicable to the material described on the front of this Test Report:

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0358-03	123633	<b>P4</b>	Charter Steel Ohio Processing Division	6255 US Highway 23, Risingsun, OH 43457
0358-04	125544	<b>CSC</b>	Charter Steel Cleveland	4300 E. 49 <sup>th</sup> St., Cuyahoga Heights, OH 44125-1004
.	.	--	Subcontracted test performed by laboratory not in Charter Steel system	

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Grain Size	CSMD	ASTM E112
Tensile Test	CSR/ CSPD, P4, CSC	ASTM E8; ASTM A370
Rockwell Hardness	CSR/ CSPD, P4, CSC	ASTM E18; ASTM A370
Microstructure (spheroidization)	CSR/ CSPD, P4	ASTM A892
Cleanliness	CSR/ CSPD, CSC	ASTM E45

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  - Both sides of all pages must be reproduced in full
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9. Where the customer has provided a specification, the results on the front of this test report conform to that specification unless otherwise noted on this test report.



# TEST REPORT

# MITTAL

REQ., JOB, CONTRACT NO.

PURCHASE ORDER NO.  
32288

V  
E  
N  
D  
O  
R

MITTAL STEEL USA  
INDIANA HARBOR BAR PRODUCTS  
3300 DICKEY ROAD  
EAST CHICAGO, INDIANA 46312

SHIPPER'S NO.

MILL ORDER NO.

212278

REPORT PRINT DATE

10/22/2005

TEST REPORT TO:  
UNYTITE

SHIP TO:

UNYTITE, INC

1 UNYTITE DR

ONE UNYTITE DRIVE

PERU IL

61354

PERU IL, 61354

CMS (REG TM) SQ HOT ROLLED ROUNDS SAE 1045 MOD /RMS-009 (03/09/01) 5 / FINE  
GRAIN/CWQ/RESTRICTED CHEMICAL REQ/RESTRICTED MAX INCIDENTAL ELEMENTS/MRR FOR  
SPEC SURF & CLEAN/SPECIAL STRAIGHTENED/EDDY CURRENT TESTED/

RND 1.3750 IN X 24 FT 10 1/2 IN

HEAT: 599685 C : 0.45 Mn: 0.66 P : .012 S : .021 Si: 0.18  
Cu: .18 Ni: 0.08 Cr: 0.08 Mo: .03 Al: .021  
Cb: .001 V : .001 N : .009 Ti: .001

Ni+Cr = 0.16

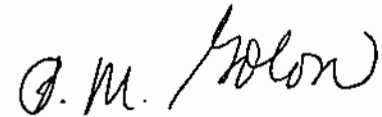
MICROCLEANLINESS per A (SULF) B (ALUM) C (SILI) D (OXID)  
ASTM E45 METHOD A 2.0T 0.0H 0.0T 0.0H 0.0T 0.0H 1.0T 0.0H

DECARBURIZATION: A.A.D. 0.009"

PART NUMBER: CSRB1045M1375

MATERIAL MEETS AUSTENITIC GRAIN SIZE REQUIREMENT OF 5 OR FINER  
MATERIAL IS 100% SMELT/MELT AND MANUFACTURED IN THE U.S.A.


PAMELA M GOLON  
NOTARY PUBLIC STATE OF INDIANA  
LAKE COUNTY  
MY COMMISSION EXP. MAR. 23, 2010



NOTARY

Unless otherwise stated, the steel described herein was manufactured, inspected and tested in accordance with the requirements of the contract or purchase order and conform to those requirements. The steel is free of surface mercury contamination at the time of shipment based on present methods and detection equipment. No mercury, radium or alpha source materials were used in the production of this steel. This steel has not been welded nor repair welded. Heat analyses and test results marked with an asterisk (\*) were reported by a Mittal Steel USA, Indiana Harbor Bar Products approved third party. The "\*" sign at the beginning of any line indicates an amendment to that line from a previously issued report for the same heat/order. All tests were performed by Mittal Steel USA, Indiana Harbor Bar Products, in accordance with the following, unless otherwise specified: Chemistry per ASTM E415 & E1019; Hardenability per ASTM A255 and SAE J406; Macrostructure per ASTM E381 & E1180; Mechanical Properties per ASTM A370, E8 & E23; Hardness per ASTM E10 & E18; and SAE J417; Cleanliness per SAE J421; Microstructure/Microcleanliness per ASTM E3, E45, E112 & E1077, J419 & J422, and JIS G0555; NDT per ASNT-TC-1A, Rounding per ASTM E29. Tested per most recent standard, unless otherwise noted. We hereby certify that the heat and/or test results in this report are applicable only to the items described herein, and are correct as contained in the records of the Company. This document shall not be reproduced except in full.

The management system governing the manufacture of this product is ISO/TS 16949:2002 certified, Certificate No. 38325; ISO 14001:1996 certified, Certificate No. 36274 and AZLA accredited in the fields of: Chemical, Mechanical and Environmental Testing - Certificate Nos. 111.01, 111.02 and 111.03

  
Kevin R. Oberemb1  
Manager - Quality Department



640 Lavoy Road  
 Erie, MI 48133  
 Phone: 734/848-2915 Fax: 734/848-8734

**CERTIFICATE  
 OF B7376  
 ANALYSIS**

CUSTOMER ORDER NO: 13497	CERTIFICATION NO: 22-123107	SHIPPER NO: 22-123107	CERTIFIED DATE: 09/29/05
CUSTOMER PART NO: P2281H00	DH	SIZE: .1360 x 4.4370 x	COIL
CUSTOMER:  PRESTIGE STAMPING INC. **  P O BOX 1086  WARREN MI 480901086		GRADE: SAE J403 1050	
		COATING SPECIFICATION: MELTED AND MANUFACTURED IN THE U.S.A.	

ATTENTION:

~~All units of measurement for chemistry are in weight percent.~~

COIL NO.	HEAT NUMBER	CHEMISTRY AND MECHANICAL PROPERTIES
EP5703	C34508	C = 0.510 MN= 0.710 P:= 0.009 S = 0.003 SI= 0.030 AL= 0.038

COMMENT:\*\* MILL CERTIFICATION WITH LOAD \*\*

**RECEIVED**

OCT 03 2005

*JA*

*[Signature]*

THE ABOVE MECHANICAL AND CHEMICAL ANALYSES WERE SUPPLIED BY THE PRODUCING MILL OR TESTED ON OUR OWN EQUIPMENT.  
 Form No. FQC 001 Rev. 2

Agent for Heidtman Steel Products, Inc.

HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17642

Invoice No. K09860

Invoice Date 01/25/07

Sales Order K09860

Cert No Inv Line No Item No

Quantity Lot No

Assembly No Haydon PO

17536 , 110000 PTF113250

10 73131A

Heat 299089

A41485

# INSPECTION CERTIFICATE

SET LOT NO. 73131A

**UNYRITE, INC.**  
One Unyrite Drive  
Peru, Illinois 61354

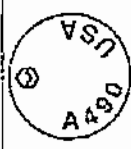
815-224-2221 — FAX # 815-224-3434




Specification	Size	Quantity
ASTM A490 Type 1 -00	1-1/8 UNC X 2-1/2	6,625 pcs.
ASTM A563 Grade DH -00		
ASTM F436 Type 1 -00		

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

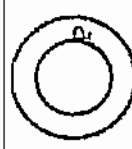
**BOLT LOT NO. 73131** Date: **APR. 04, '03**

Mechanical Property of Full Size Bolts	IDENTIFICATION	Chemical Composition %									
		C	Si	Mn	P	S	Cu	Ni	Cr	Mo	B
Tensile Strength	 Heat No.	30	-	60	40	50	-	-	-	-	-
Proof Load (Length Method)		52	-	60	40	50	-	-	-	-	-
Position of fracture											
Max. Part of Screw											
Part of Screw											
ALL PASS	299089	41	21	94	8	10	5	4	96	17	0

**NUT LOT NO. 09611**

Mechanical Property of Full Size Nuts	IDENTIFICATION	Chemical Composition %									
		C	Si	Mn	P	S	Cu	Ni	Cr	Mo	B
Hardness After 24 hr x 1000* F HRB	 Heat No.	20	-	60	40	50	-	-	-	-	-
Min. HRB 89		55	-	60	40	50	-	-	-	-	-
Proof Load (Lbf)											
133600											
ALL PASS											
ALL PASS	S56422	46	24	69	1.0	23	27	9	12		

**WASHER LOT NO. J891**

Mechanical Property of Full Size Washers	IDENTIFICATION	Chemical Composition %									
		C	Si	Mn	P	S	Cu	Ni	Cr	Mo	B
Hardness (HRC)	 Heat No.	-	-	-	40	50	-	-	-	-	-
Min. HRC 45		48	-	-	40	50	-	-	-	-	-
Proof Load (Lbf)											
217029											
ALL PASS											
ALL PASS	217029	48	45	68	14	10					

Material used for the bolt, nut and washer were melted & manufactured in the USA. The product was manufactured in the USA to ASTM specifications. The bolt and nut are manufactured by Unyrite. We hereby certify that the material described has been manufactured and inspected satisfactory with requirement of the above specification.

**04-07-03** Chief of Quality Assurance Section

*[Signature]*

Thread Accuracy (Bolt & Nut)	REMARKS
Bolt ASME B1.1 Class 2A	THESE BOLTS HAVE BEEN MAGNETIC PARTICLE INSPECTION IN ACCORDANCE WITH THE REQUIREMENTS OF SPECIFICATION ASTM A490
Nut ASME B1.1 Class 2B	

**Fastener Tension**

Fastener Tension	Spec. (lbf)	Min.
	84000	84000
	97606	97606
	576	576

OFFICIAL SEAL  
JEAN MARGHERIO  
Notary Public, State of Illinois  
My Commission Expires 11-18-2004

# HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17642

Invoice No. K09860

Invoice Date 01/25/07

Sales Order K09860

Cert No Inv Line No Item No

Quantity Lot No

Assembly No

Haydon PO

29661 · 120000 PTF100375

20 AV781A

Heat 425870

A44772

# INSPECTION CERTIFICATE

SET LOT NO. AV781A

**UNYTITE, INC.**  
One Unytite Drive  
Peru, Illinois 61354

815-224-2221 — FAX # 815-224-3434



Specification	Size	Quantity
ASTM A490 Type 1	1 - 8 UNC X 3-3/4	7,521 pcs.
ASTM A563 Grade DH		
ASTM F436 Type 1		

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

**BOLT LOT NO.** AV781 Date: Aug. 16, '06

Mechanical Property of Full Size Bolts				Chemical Composition %										
				Tensile Strength	Proof Load	Hardness	IDENTIFICATION							
Load (lbf)	7270 (lbf)	7270 (lbf)	HRC		C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100	Mo x 100	B x 10,000
Position of fracture	Max.	Max.	HRC		Heat No.	30			Max. 40	Max. 40				
Part of Screw	+/- 0.0005 in.				39	26	95	9	12	9	7	82	21	1
Part of Screw	ALL PASS	34.8			425870	1580	1004							
Average 8 pcs														

**NUT LOT NO.** AW161

Mechanical Property of Full Size Nuts				Chemical Composition %										
				Hardness	Proof Load	Hardness	IDENTIFICATION							
After 24 hr x 1000° F HRB	106050	106050	HRC		C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100		
Min.			HRC		Heat No.	20			Max. 40	Max. 50				
Spec. 24-38	HRB 89				55			60	40	50				
Mean/Spcs	—	1562			46	24	81	12	31	16	7	15		

**WASHER LOT NO.** WB7726

Mechanical Property of Full Size Washers				Chemical Composition %										
				Hardness	Proof Load	Hardness	IDENTIFICATION							
38-45	—	—	HRC		C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100		
41.5			HRC		Heat No.	34			Max. 40	Max. 50				
Mean/5 Pcs.					9501036	8	69	8	3					

Material used for the bolt, nut and washer were melted & manufactured in the USA. The product was manufactured in the USA to ASTM specifications. The bolt and nut are manufactured by Unytite. We hereby certify that the material described has been manufactured and inspected satisfactory with requirement of the above specification.

08-17-06

Chief of Quality Assurance Section

Thread Accuracy (Bolt & Nut)		REMARKS
Bolt	ASME B1.1 Class 2A	
Nut	ANSI B1.1 Class 2B	

**Fastener Tension**

Fastener Tension	Spec. (lbf.)	Min.
		67200
	Mean ± 6 sets.	85764
	Standard Deviation	3000

**Fastener Tension**

Chemical Composition %			
C x 100	Si x 100	Mn x 100	Cr x 100
30			
48			
39	26	95	9
12	9	7	82
21	1		

**Fastener Tension**

NOTARY PUBLIC - STATE OF ILLINOIS  
JEAN MARGHERIO  
MY COMMISSION EXPIRES: 10/31/09  
STANDARD DEVIATION

LOAD



# CHARTER STEEL

## CHARTER STEEL TEST REPORT Reverse Has Text And Codes

A Division of  
Charter Manufacturing Company, Inc.

1658 Cold Springs Road  
Saukville, Wisconsin 53080  
(262) 268-2400  
1-800-437-8789  
FAX (262) 268-2570

UNYTITE, INC.  
ONE UNYTITE DRIVE  
PERU, IL 61354-  
Attn: ATTEN: JEAN MARGHERIO

Cust. P.O.	33617
Cust Part#	C4140SC0.984A
Charter Sales Order	211781
Heat #	425870
Ship Lot #	490321
Grade#	4140 A SK FG RHQ
Process	DFSAR
Finish Size	0.984

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed below and on the reverse side, and that it satisfies those requirements.

### Test Results of Heat Lot# 425870

Lab Code: 7388	C	MN	P	S	SI	NI	CR	MO	CU	SN	V
Chemistry	0.39	0.95	0.009	0.012	0.260	0.07	0.82	0.21	0.09	0.008	0.001
Wt%											
	AL	N	B	TI	NB						
	0.024	0.0070	0.0001	0.001	0.002						

CHEM. DEVIATION EXT.-GREEN = N/R

### Test Results of Rolling Lot # 342223

QC DEVIATION EXT.-GREEN = N/R

	# of Tests	Test Results of Processing Lot # 490321			
		Min Value	Max Value	Mean Value	
TENSILE (KSI)	3	92.7	92.9	92.9	TENSILE LAB = 0358-02
REDUCTION OF AREA (%)	3	59	60	59	RA LAB = 0358-02
ROCKWELL B (HRBW)	3	92	94	93	RB LAB = 0358-02
WIRE SIZE (Inches)	10	0.982	0.983	0.982	
WIRE OUT OF ROUND (Inches)	10	0.000	0.001	0.000	

NUM DECARB = 2 FREE FERRITE DECARB = 0.000 FREE FERR & PARTIAL DECARB = 0.001  
CP SPHERO % LAB = 0358-02 NUM SPHERO = 2 SPHERODIZATION (%) = 82.5  
QC DEVIATION EXT.-PROCESSED = N/R

Specifications: Meets customer specifications with any applicable Charter Steel exceptions for the following customer documents:  
Customer Document = UNYTITE RMS-003 Revision = 2 Dated =

Additional Comments:

Charter Steel  
Saukville, WI, USA



Tim Leahy  
Manager of Quality Assurance  
06/27/2006



The following statements are applicable to the material described on the front of this Test Report:

1. Except as noted, the steel supplied for this order was melted, rolled and processed in the United States.
2. Mercury was not used during the manufacture of this product; nor was the steel contaminated with mercury during processing.
3. Unless directed by the customer, there are no welds in any of the coils produced for this order.
4. The laboratory that generated the analytical or test results can be identified by the following key:

Certificate Number	Lab Code	Laboratory		Address
0358-01	7388	CSMD	Charter Steel Melting Division	1658 Cold Springs Road, Saukville, WI 53080
0358-02	8171	CSR/D/ CSPD	Charter Steel Rolling/ Processing Division	1658 Cold Springs Road, Saukville, WI 53080
0358-03	123633	P4	Charter Steel Ohio Processing Division	6255 US Highway 23, Risingsun, OH 43457
0358-04	125544	CSC	Charter Steel Cleveland	4300 E. 49 <sup>th</sup> St., Cuyahoga Heights, OH 44125-1004
		--	Subcontracted test performed by laboratory not in Charter Steel system	

5. When run by a Charter Steel laboratory, the following tests were performed according to the latest revisions of the specifications listed below, as noted in the Charter Steel Laboratory Quality Manual:

Test	Possible Laboratory	Specification
Chemistry Analysis	CSMD	ASTM E415; ASTM E1019
Macroetch	CSMD	ASTM E381
Hardenability (Jominy)	CSMD	ASTM A255; JIS G0561
Grain Size	CSMD	ASTM E112
Tensile Test	CSR/D/CSPD, P4, CSC	ASTM E8; ASTM A370
Rockwell Hardness	CSR/D/CSPD, P4, CSC	ASTM E18; ASTM A370
Microstructure (spheroidization)	CSR/D/CSPD, P4	ASTM A892
Cleanliness	CSR/D/CSPD, CSC	ASTM E45

Charter Steel has been accredited to perform all of the above tests by the American Association for Laboratory Accreditation (A2LA). These accreditations expire 01/31/07.

All other test results associated with a Charter Steel laboratory that appear on the front of this report, if any, were performed according to documented procedures developed by Charter Steel and are not accredited by A2LA.

6. The test results on the front of this report are the true values measured on the samples taken from the production lot. They do not apply to any other sample.
7. This test report cannot be reproduced or distributed except in full without the written permission of Charter Steel. The primary customer whose name and address appear on the front of this form may reproduce this test report, subject to the following restrictions:
  - It may be distributed only to their customers
  - Both sides of all pages must be reproduced in full
8. This certification is given subject to the terms and conditions of sale provided in Charter Steel's acknowledgment (designated by our Purchase Order number) to the customer's purchase order. Both Purchase Order numbers appear on the front page of this Report.
9. Where the customer has provided a specification, the results on the front of this test report conform to that specification unless otherwise noted on this test report.



**MacSteel**

ONE JACKSON SQUARE  
SUITE 500  
JACKSON, MICHIGAN 49201

**CERTIFIED MATERIAL TEST REPORT**

<b>CUSTOMER ORDER NUMBER</b> 35869	<b>CUSTOMER PART NUMBER</b> B1045SC12500	<b>HEAT NUMBER</b> M19920	<b>WORK ORDER NUMBER</b> 39507 101	<b>DATE</b> 7/11/06
---------------------------------------	---	------------------------------	---------------------------------------	------------------------

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

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

**ORDERED**

<b>GRADE</b> 1045	<b>SIZE</b> 1 1/4" RND	<b>LENGTH</b> 24' 10 1/2"
----------------------	---------------------------	------------------------------

**CUSTOMER SPECIFICATIONS**  
SAE 1045; ASTM E381-91

**CHEMICAL ANALYSIS - (BAR AVERAGE)**

C	Mn	P	S	Si	Ni	Cr	Mo	Cu	Sn	Al
0.46	0.81	0.012	0.031	0.24	0.07	0.15	0.04	0.16	0.007	0.002
V	Nb									
0.054	0.001									

**GRAIN SIZE** SPECIFICATION ASTM E112 FINE GRAIN 5-8

**MACROCLEANLINESS** SPECIFICATION ASTM E381

**PLATE I**

**PLATE II**

	S	R	C	
AVERAGE	1	1	1	NONE

**DECARB** SPECIFICATION ASTM E1077

F TOTAL= 0.004

PAGE 1

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

MacSteel-Arkansas   
MacSteel-Michigan

MacSteel-Monroe

*Chris Easter*

Quality Assurance Representative

CONTINUED ON PAGE 2

**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
35869	B1045SC12500	M19920	39507 101	7/11/06

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 1/4" RND	24' 10 1/2"

CUSTOMER SPECIFICATIONS

SAE 1045; ASTM E381-91

REDUCTION RATIO

RATIO= 29.3 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-Arkansas  MacSteel-Monroe   
MacSteel-Michigan

*Chris Easter*

Quality Assurance Representative



640 Lavoy Road  
Erie, MI 48133  
Phone: 734/848-2915 Fax: 734/848-8734

B7126

# CERTIFICATE OF ANALYSIS

CUSTOMER ORDER NO: 13796	CERTIFICATION NO: 2 -205807	SHIPPER NO: 2 -205807	CERTIFIED DATE: 01/11/06
CUSTOMER PART NO: P2085H01	RF	SIZE: .1360 x 5.7340 x	COIL

CUSTOMER:

PRESTIGE STAMPING INC. \*\*  
P O BOX 1086  
WARREN MI 480901086

GRADE  
SAE J403 1035

COATING SPECIFICATION  
MELTED AND MANUFACTURED IN THE  
U.S.A.

ATTENTION:

All units of measurement for chemistry are in weight percent.

COIL NO.	HEAT NUMBER	CHEMISTRY AND MECHANICAL PROPERTIES
EW2501	9501036	C = 0.340 MN= 0.690 P = 0.008 S = 0.003 SI= 0.080 AL= 0.043

RECEIVED

*JK*

THE ABOVE MECHANICAL AND CHEMICAL ANALYSES WERE SUPPLIED  
BY THE PRODUCING MILL OR TESTED ON OUR OWN EQUIPMENT.  
Form No. FQC 001 Rev. 2

Agent for Heidman Steel Products, Inc.

HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17642

Invoice No. K09860

Invoice Date 01/25/07

Sales Order K09860

Cert No Inv Line No Item No

Quantity Lot No

Assembly No

Haydon PO

31085 130000 PTF100350

55 JH481A

Heat 448130

A44772

# INSPECTION CERTIFICATE

**UNYTITE, INC.**

One Unytite Drive  
Peru, Illinois 61354

815-224-2221 — FAX # 815-224-3434



JH481A

Specification	Quantity
ASTM A490 F2280 Type 1	7,596 pcs.
ASTM A563 Grade DH	
ASTM F436 Type 1	

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

**BOIL LOT NO.** JH481

**Date:** Dec. 04, '06

Mechanical Property of Full Size Bolts				Chemical Composition %											
				Tensile Strength	Proof Load	Hardness	IDENTIFICATION								
Load (lbf)	Position of fracture	(Length Method)	HRC	Heat Treatment °F (°C)		C x 100									
Max.	Part of Screw	+/ - 0.0005 in.		Quench	Temper	30	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100	Mo x 100	B x 10,000
90900					Min. 800	48									
104850						40	25	89	8	9	9	5	95	17	1
101275	Part of Screw	ALL PASS	34.7	1580	995	40	448130								

**NUT LOT NO.** BB251

Mechanical Property of Full Size Nuts				Chemical Composition %											
Hardness After 24 hr x 1000° F	Proof Load (Lbf)	Hardness	HRC	Heat Treatment °F (°C)		IDENTIFICATION									
Min.	Part of Nut	Min.		Quench	Temper	20	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100		
HRB 89	106050	650			Min. 650	55									
—	ALL PASS	1562	1175	23	46	80	14	30	15	7	11				

**WASHER LOT NO.** WB7877

Mechanical Property of Full Size Washers				Chemical Composition %											
Hardness (HRC)	Proof Load (Lbf)	Hardness	HRC	Heat Treatment °F (°C)		IDENTIFICATION									
Min.	Part of Washer	Min.		Quench	Temper	35	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100		
38 - 45	9501779	8	72		Max. 10	10									
40.0			10			35	8	72	10						

Material used for the bolt, nut and washer were melted & manufactured in the USA. The product was manufactured in the USA to ASTM specifications. The bolt and nut are manufactured by Unytite. We hereby certify that the material described has been manufactured and inspected satisfactory with requirement of the above specification.

Chief of Quality Assurance Section

*[Signature]*

Thread Accuracy (Bolt & Nut)	REMARKS
Bolt ASME B1.1 Class 2A	THESE BOLTS HAVE BEEN MAGNETIC PARTICLE INSPECTION IN ACCORDANCE WITH THE REQUIREMENTS OF SPECIFICATION ASTM A490
Nut ASME B1.1 Class 2B	

**Fastener Tension**

Fastener Tension	
Spec. (lbf)	67200
Mean / 5 sets.	79402
Standard Deviation	5120

OFFICIAL SEAL  
 JEAN MARGHERIO  
 NOTARY PUBLIC - STATE OF ILLINOIS  
 MY COMMISSION EXPIRES 10/18/08

LOAD



# CHARTER STEEL

## CHARTER STEEL TEST REPORT Reverse Has Text And Codes

A Division of  
Charter Manufacturing Company, Inc.

1658 Cold Springs Road  
Saukville, Wisconsin 53080  
(262) 268-2400  
1-800-437-8789  
FAX (262) 268-2570

UNYTITE, INC.  
ONE UNYTITE DRIVE  
PERU, IL 61354-  
Attn: ATTEN: JEAN MARGHERIO

Cust. P.O.	PO01080
Cust. Part#	C4140SC0.984A
Charter Sales Order	224214
Heat #	448130
Ship Lot #	500209
Grade#	4140 A SK FG RHQ
Process	DFSAR
Finish Size	0.984

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed below and on the reverse side, and that it satisfies those requirements.

### Test Results of Heat Lot# 448130

Lab Code: 7388											
Chemistry	C	MN	P	S	SI	NI	CR	MO	CU	SN	V
Wt%	0.40	0.89	0.008	0.009	0.250	0.05	0.95	0.17	0.09	0.008	0.001
	AL	N	B	TJ	NB						
	0.023	0.0060	0.0001	0.001	0.002						

CHEM. DEVIATION EXT.-GREEN = N/R

### Test Results of Rolling Lot # 352084

QC DEVIATION EXT.-GREEN = N/R

### Test Results of Processing Lot # 500209

	# of Tests	Min Value	Max Value	Mean Value	
TENSILE (KSI)	3	91.1	92.5	91.7	TENSILE LAB = 0358-02
REDUCTION OF AREA (%)	3	54	62	58	RA LAB = 0358-02
ROCKWELL B (HRBW)	3	92	93	92	RB LAB = 0358-02
WIRE SIZE (Inches)	10	0.982	0.983	0.983	
WIRE OUT OF ROUND (Inches)	10	0.000	0.000	0.000	

NUM DECARB = 2 FREE FERRITE DECARB = 0.000 FREE FERR & PARTIAL DECARB = 0.004  
CP SPHERO % LAB = 0358-02 NUM SPHERO = 2 SPHERODIZATION (%) = 82.5  
QC DEVIATION EXT.-PROCESSED = N/R

Specifications: Meets customer specifications with any applicable Charter Steel exceptions for the following customer documents:  
Customer Document = UNYTITE RMS-003 Revision = 2 Dated =

Additional Comments:

Charter Steel  
Saukville, WI, USA



Tim Leahy  
Manager of Quality Assurance  
10/30/2006

Fax number: ( ) Rem: Load1,Mail0,Fax0

The following statements are applicable to the material described on the front of this Test Report:

1. Except as noted, the steel supplied for this order was melted, rolled and processed in the United States.
2. Mercury was not used during the manufacture of this product; nor was the steel contaminated with mercury during processing.
3. Unless directed by the customer, there are no welds in any of the coils produced for this order.
4. The laboratory that generated the analytical or test results can be identified by the following key:

Certificate Number	Lab Code	Laboratory		Address
0358-01	7388	CSMD	Charter Steel Melting Division	1658 Cold Springs Road, Saukville, WI 53080
0358-02	8171	CSR/ CSPD	Charter Steel Rolling/ Processing Division	1658 Cold Springs Road, Saukville, WI 53080
0358-03	123633	P4	Charter Steel Ohio Processing Division	6255 US Highway 23, Risingsun, OH 43457
0358-04	125544	CSC	Charter Steel Cleveland	4300 E. 49 <sup>th</sup> St., Cuyahoga Heights, OH 44125-1004
.	.	--	Subcontracted test performed by laboratory not in Charter Steel system	

5. When run by a Charter Steel laboratory, the following tests were performed according to the latest revisions of the specifications listed below, as noted in the Charter Steel Laboratory Quality Manual:

Test	Possible Laboratory	Specification
Chemistry Analysis	CSMD	ASTM E415; ASTM E1019
Macroetch	CSMD	ASTM E381
Hardenability (Jominy)	CSMD	ASTM A255; JIS G0561
Grain Size	CSMD	ASTM E112
Tensile Test	CSR/ CSPD, P4, CSC	ASTM E8; ASTM A370
Rockwell Hardness	CSR/ CSPD, P4, CSC	ASTM E18; ASTM A370
Microstructure (spheroidization)	CSR/ CSPD, P4	ASTM A892
Cleanliness	CSR/ CSPD, CSC	ASTM E45

Charter Steel has been accredited to perform all of the above tests by the American Association for Laboratory Accreditation (A2LA). These accreditations expire 01/31/07.

All other test results associated with a Charter Steel laboratory that appear on the front of this report, if any, were performed according to documented procedures developed by Charter Steel and are not accredited by A2LA.

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  - Both sides of all pages must be reproduced in full
8. This certification is given subject to the terms and conditions of sale provided in Charter Steel's acknowledgment (designated by our Purchase Order number) to the customer's purchase order. Both Purchase Order numbers appear on the front page of this Report.
9. Where the customer has provided a specification, the results on the front of this test report conform to that specification unless otherwise noted on this test report.





**MacSteel**

ONE JACKSON SQUARE  
SUITE 500  
JACKSON, MICHIGAN 49201

**CERTIFIED MATERIAL TEST REPORT**

<b>CUSTOMER ORDER NUMBER</b> 35869	<b>CUSTOMER PART NUMBER</b> B1045SC12500	<b>HEAT NUMBER</b> M20630	<b>WORK ORDER NUMBER</b> 39507 102	<b>DATE</b> 7/11/06
---------------------------------------	---	------------------------------	---------------------------------------	------------------------

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

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

**ORDERED**

<b>GRADE</b> 1045	<b>SIZE</b> 1 1/4" RND	<b>LENGTH</b> 24' 10 1/2"
----------------------	---------------------------	------------------------------

**CUSTOMER SPECIFICATIONS**  
SAE 1045; ASTM E381-91

**CHEMICAL ANALYSIS - (BAR AVERAGE)**

C	Mn	P	S	Si	Ni	Cr	Mo	Cu	Sn	Al
0.46	0.80	0.014	0.030	0.23	0.07	0.11	0.03	0.15	0.006	0.004
V	Nb									
0.053	0.001									

**GRAIN SIZE** SPECIFICATION ASTM E112 FINE GRAIN 5-8

**MACROCLEANLINESS** SPECIFICATION ASTM E381

PLATE I

PLATE II

	S	R	C	
AVERAGE	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-Arkansas  MacSteel-Monroe   
MacSteel-Michigan

Chris Easter

Quality Assurance Representative

CONTINUED ON PAGE 2

**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
35869	B1045SC12500	M20630	39507 102	7/11/06

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

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

**ORDERED**

GRADE	SIZE	LENGTH
1045	1 1/4" RND	24' 10 1/2"

**CUSTOMER SPECIFICATIONS**

SAE 1045; ASTM E381-91

**REDUCTION RATIO**

RATIO= 29.3 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-Arkansas   
MacSteel-Michigan

MacSteel-Monroe

*Chris Easter*

Quality Assurance Representative

LOT  
B7877

B7877



640 Lavoy Road  
Erie, MI 48133  
Phone: 734/848-2915 Fax: 734/848-8734

# CERTIFICATE OF ANALYSIS

CUSTOMER ORDER NO: 13885	CERTIFICATION NO: 2 -206893	SHIPPER NO: 2 -206893	CERTIFIED DATE: 02/09/06
CUSTOMER PART NO: P2085H00	AD	SIZE: .1360 <sub>x</sub> 5.7340 <sub>x</sub>	COIL
CUSTOMER:  PRESTIGE STAMPING INC. **  P O BOX 1086  WARREN MI 480901086		GRADE: SAE J403 1035  MELTED AND MANUFACTURED IN THE U.S.A.	

ATTENTION:

All units of measurement for chemistry are in weight percent.

COIL NO.	HEAT NUMBER	CHEMISTRY AND MECHANICAL PROPERTIES
GB5502	9501779	C = 0.350 MN= 0.720 P = 0.010 S = 0.002 SI= 0.080 AL= 0.052
COMMENT:** MILL CERTIFICATION WITH LOAD **		

## RECEIVED

FEB 13 2006

*JA*

*[Signature]*  
Heidman Steel Products, Inc.

THE ABOVE MECHANICAL AND CHEMICAL ANALYSES WERE SUPPLIED BY THE PRODUCING MILL OR TESTED ON OUR OWN EQUIPMENT.  
Form No. FQC 001 Rev. 1

# HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17642

Invoice No. K09860

Invoice Date 01/25/07

Sales Order K09860

Cert No Inv Line No Item No

Quantity Lot No

Assembly No Haydon PO

30947 · 140000 PTF100325

90 JH461A

Heat 448130

A44772

# INSPECTION CERTIFICATE

JH461A

**UNYTITE, INC.**

One Unytite Drive  
Peru, Illinois 61354

815-224-2221 — FAX # 815-224-3434



Specification	Size	Quantity
ASTM A490 F2280 Type 1 ASTM A563 Grade DH ASTM F436 Type 1	1 - 8 UNC X 3-1/4	12,995 pcs.

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

**BOLT LOT NO.** JH461

**Date:** Dec. 12, '06

Mechanical Property of Full Size Bolts				Chemical Composition %																							
Tensile Strength	Proof Load 72700 lbf. (Length Method)	Hardness	Heat Treatment	IDENTIFICATION																							
				F (°C)		Quench		Temper		Min.		800															
90900 1.04850	Max. +/- 0.0005 in.	HRC 34.9	1580	995		448130		40		25		89		8		9		9		5		95		17		1	
Average 8 pcs	1.00925	ALL PASS																									

**NUT LOT NO.** BB651

Mechanical Property of Full Size Nuts				Chemical Composition %																					
Hardness After 24 hr x 1000° F HRB	Proof Load (lbf)	Heat Treatment	IDENTIFICATION	IDENTIFICATION																					
				F (°C)		Quench		Temper		Min.		850													
24 - 38	106050	1562	S77122	1184		1562		74		7		34		7		10		10		3		3		3	
Mean/Spcs 28.3	ALL PASS																								

**WASHER LOT NO.** WB8588

Mechanical Property of Full Size Washers				Chemical Composition %																					
Hardness (HRC)	Proof Load (lbf)	Heat Treatment	IDENTIFICATION	IDENTIFICATION																					
				F (°C)		Quench		Temper		Min.		850													
38 - 45	106050	1562	S77122	1184		1562		74		7		34		7		10		10		3		3		3	
Mean/5 Pcs 42.5	ALL PASS																								

Material used for the bolt, nut and washer were melted & manufactured in the USA. The product was manufactured in the USA to ASTM specifications. The bolt and nut are manufactured and inspected satisfactory with requirement of the above specification.

12-13-06  
JEAN MARGHERIO  
OFFICIAL SEAL  
NOTARY PUBLIC - STATE OF ILLINOIS  
MY COMMISSION EXPIRES: 01/18/09

Chief of Quality Assurance Section

Thread Accuracy (Bolt & Nut)	
Bolt	ASME B1.1 Class 2A
Nut	ASME B1.1 Class 2B

Fastener Tension	
Spec. (lbf.)	67000
Mesh / 5 sets.	83176
Standard Deviation	5833

Fastener Tension	
Spec. (lbf.)	67000
Mesh / 5 sets.	83176
Standard Deviation	5833

Fastener Tension	
Spec. (lbf.)	67000
Mesh / 5 sets.	83176
Standard Deviation	5833

Fastener Tension	
Spec. (lbf.)	67000
Mesh / 5 sets.	83176
Standard Deviation	5833

Fastener Tension	
Spec. (lbf.)	67000
Mesh / 5 sets.	83176
Standard Deviation	5833

REMARKS	
THESE BOLTS HAVE BEEN MAGNETIC PARTICLE INSPECTION IN ACCORDANCE WITH THE REQUIREMENTS OF SPECIFICATION ASTM A490	

LOAD



# CHARTER STEEL

## CHARTER STEEL TEST REPORT Reverse Has Text And Codes

A Division of  
Charter Manufacturing Company, Inc.

1658 Cold Springs Road  
Saukville, Wisconsin 53080  
(262) 268-2400  
1-800-437-8789  
FAX (262) 268-2570

UNYTITE, INC.  
ONE UNYTITE DRIVE  
PERU, IL 61354-  
Attn: ATTEN: JEAN MARGHERIO

Cust. P.O.	PO01080
Cust Part#	C4140SC0.984A
Charter Sales Order	224214
Heat #	448130
Ship Lot #	500209
Grade#	4140 A SK FG RHQ
Process	DFSAR
Finish Size	0.984

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed below and on the reverse side, and that it satisfies those requirements.

Test Results of Heat Lot# 448130

Lab Code: 7388											
Chemistry	C	MN	P	S	SI	NI	CR	MO	CU	SN	V
Wt%	0.40	0.89	0.008	0.009	0.250	0.05	0.95	0.17	0.09	0.008	0.001
	AL	N	B	TI	NB						
	0.023	0.0060	0.0001	0.001	0.002						

CHEM. DEVIATION EXT.-GREEN = N/R

Test Results of Rolling Lot # 352084

QC DEVIATION EXT.-GREEN = N/R

Test Results of Processing Lot # 500209

	# of Tests	Min Value	Max Value	Mean Value	
TENSILE (KSI)	3	91.1	92.5	91.7	TENSILE LAB = 0358-02
REDUCTION OF AREA (%)	3	54	62	58	RA LAB = 0358-02
ROCKWELL B (HRBW)	3	92	93	92	RB LAB = 0358-02
WIRE SIZE (Inches)	10	0.982	0.983	0.983	
WIRE OUT OF ROUND (Inches)	10	0.000	0.000	0.000	

NUM DECARB = 2 FREE FERRITE DECARB = 0.000 FREE FERR & PARTIAL DECARB = 0.004  
 CP SPHERO % LAB = 0358-02 NUM SPHERO = 2 SPHERODIZATION (%) = 82.5  
 QC DEVIATION EXT.-PROCESSED = N/R

Specifications: Meets customer specifications with any applicable Charter Steel exceptions for the following customer documents:  
 Customer Document = UNYTITE RMS-003 Revision = 2 Dated =

Additional Comments:

Charter Steel  
Saukville, WI, USA



*Tim Leahy*  
Tim Leahy  
Manager of Quality Assurance  
10/30/2006

Fax number: ( ) Rem: Load1,Mail0,Fax0

The following statements are applicable to the material described on the front of this Test Report:

1. Except as noted, the steel supplied for this order was melted, rolled and processed in the United States.
2. Mercury was not used during the manufacture of this product; nor was the steel contaminated with mercury during processing.
3. Unless directed by the customer, there are no welds in any of the coils produced for this order.
4. The laboratory that generated the analytical or test results can be identified by the following key:

Certificate Number	Lab Code	Laboratory		Address
0358-01	7388	CSMD	Charter Steel Melting Division	1658 Cold Springs Road, Saukville, WI 53080
0358-02	8171	CSR/ CSPD	Charter Steel Rolling/ Processing Division	1658 Cold Springs Road, Saukville, WI 53080
0358-03	123633	P4	Charter Steel Ohio Processing Division	6255 US Highway 23, Risingsun, OH 43457
0358-04	125544	CSC	Charter Steel Cleveland	4300 E. 49 <sup>th</sup> St., Cuyahoga Heights, OH 44125-1004
.	.	-	Subcontracted test performed by laboratory not in Charter Steel system	

5. When run by a Charter Steel laboratory, the following tests were performed according to the latest revisions of the specifications listed below, as noted in the Charter Steel Laboratory Quality Manual:

Test	Possible Laboratory	Specification
Chemistry Analysis	CSMD	ASTM E415; ASTM E1019
Macroetch	CSMD	ASTM E381
Hardenability (Jominy)	CSMD	ASTM A255; JIS G0561
Grain Size	CSMD	ASTM E112
Tensile Test	CSR/ CSPD, P4, CSC	ASTM E8; ASTM A370
Rockwell Hardness	CSR/ CSPD, P4, CSC	ASTM E18; ASTM A370
Microstructure (spheroidization)	CSR/ CSPD, P4	ASTM A892
Cleanliness	CSR/ CSPD, CSC	ASTM E45

Charter Steel has been accredited to perform all of the above tests by the American Association for Laboratory Accreditation (A2LA). These accreditations expire 01/31/07.

All other test results associated with a Charter Steel laboratory that appear on the front of this report, if any, were performed according to documented procedures developed by Charter Steel and are not accredited by A2LA.

6. The test results on the front of this report are the true values measured on the samples taken from the production lot. They do not apply to any other sample.
7. This test report cannot be reproduced or distributed except in full without the written permission of Charter Steel. The primary customer whose name and address appear on the front of this form may reproduce this test report, subject to the following restrictions:
  - It may be distributed only to their customers
  - Both sides of all pages must be reproduced in full
8. This certification is given subject to the terms and conditions of sale provided in Charter Steel's acknowledgment (designated by our Purchase Order number) to the customer's purchase order. Both Purchase Order numbers appear on the front page of this Report.
9. Where the customer has provided a specification, the results on the front of this test report conform to that specification unless otherwise noted on this test report.



**GERDAU AMERISTEEL**

ST PAUL STEEL MILL  
1678 RED ROCK ROAD  
ST PAUL MN 55119 USA  
(651) 731-5600

Chemical and Physical Test Report  
MADE IN UNITED STATES

M-033866

**PRODUCED IN: ST PAUL**

SHIP TO UNYTITE INC 1 UNYTITE DRIVE PERU, IL 61354	INVOICE TO UNYTITE INC 1 UNYTITE DRIVE PERU, IL 61354	SHIP DATE 11/13/06
		CUST. ACCOUNT NO 70000042

SHAPE + SIZE	GRADE	SPECIFICATION	SALES ORDER	CUST P.O. NUMBER
R1 1/4S8Q	C1045M23F	A576-908(2000), A29/A29M-05	5072000-06	P001012-06
HEAT I.D.	C	Min P S Si Cu Ni Cr Mo V Nb N Sn Al Ti Ca Co		
S77122	.44	.71 .007 .023 .22 .21 .09 .11 .030 .027 .002 .0094 .019 .002 .00250 .00130 .009		

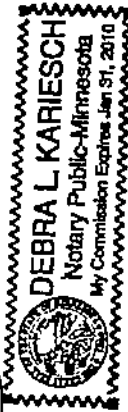
Mechanical Test: Red R. 24.5 Std Dev:0 ldl Diam: 1.359  
Cleanliness Test

FG(5-8), ROLL LOT M627631, VENDOR HEAT S77122, QUALITY PROG. MANUAL REV. 1, DTD 6/10/05  
Fine

Grain Test: Jominy:	J1	J2	J3	J4	J5	J6	J7	J8	J9	J10	J12	J14	J16	J18	J20	J24	J28	J32
	58	54	46	34	28.5	25	24	23	22	21	19	19	18	17	16	15	14	14

Customer Requirements SOURCE: MINNESOTA BILLETS CASTING; STRAND CAST  
CUST ITEM NUMBER: 81045SC1.2500

*Debra L Kariesch*



This material, including the billets, was produced and manufactured in the United States of America

Bhaskar Yalamanchili  
Quality Director  
Gerdau Ameristeel

*Bhaskar*

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

Mgr. Metallurg. Svcs.  
ST PAUL STEEL MILL

Seller warrants that all material furnished shall comply with specifications subject to standard published manufacturing variations. NO OTHER WARRANTIES, EXPRESSED OR IMPLIED, ARE MADE BY THE SELLER, AND SPECIFICALLY EXCLUDED ARE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. In no event shall seller be liable for indirect, consequential or punitive damages arising out of or related to the materials furnished by seller. Any claim for damages for materials that do not conform to specifications must be made from buyer to seller immediately after delivery of same in order to allow the seller the opportunity to inspect the material in question.





**GERDAU AMERISTEEL**

**Lead and Mercury Content of Steel**

Lead and mercury are not purposefully introduced in the Gerdau Ameristeel steel manufacturing process, and are not present at levels that would require disclosure on Material Safety Data Sheets. To the best of our knowledge, no mercury is present in our steel products.

Sincerely,

Gerdau Ameristeel

A. James Turner  
Director, Environment & Quality



**GERDAU AMERISTEEL™**

**Weld Repair of Finished Product**

We hereby certify that weld repair of finished products is not performed at Gerda Ameristeel.

Sincerely,

Gerda Ameristeel

A. James Turner  
Director, Environment & Quality

B8588



640 Lavoy Road  
Erie, MI 48133  
Phone: 734/848-2915 Fax: 734/848-8734

# CERTIFICATE OF ANALYSIS

CUSTOMER ORDER No: 14463	CERTIFICATION No: 2 -215069	SHIPPER No: 2 -215069	CERTIFIED DATE: 08/21/06
CUSTOMER PART No: P2085HP400	DH	SIZE: .1360 x 5.5800 x	COIL
CUSTOMER:  PRESTIGE STAMPING INC. **  P O BOX 1086  WARREN MI 480901086		GRADE: SAE J403 1035	
MATERIAL MANUFACTURED IN THE U.S.A.			

ATTENTION:

~~All units of measurement for chemistry are in weight percent.~~

COIL NO.	HEAT NUMBER	CHEMISTRY AND MECHANICAL PROPERTIES
HT5901	9402601	C = 0.340 MN= 0.740 P = 0.010 S = 0.003 SI= 0.070 AL= 0.052 COMMENT:** MILL CERTIFICATION WITH LOAD **

## RECEIVED

AUG 29 2006

Time JA

THE ABOVE MECHANICAL AND CHEMICAL ANALYSES WERE SUPPLIED BY THE PRODUCING MILL OR TESTED ON OUR OWN EQUIPMENT.  
Form No. IQC 001 Rev. 7

*[Signature]*  
Agent for Heidman Steel Products, Inc.

# HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17642

Invoice No. K09860

Invoice Date 01/25/07

Sales Order K09860

Cert No Inv Line No Item No

Quantity Lot No

Heat

Assembly No

Haydon PO  
A44772

31056 . 150000 PTF100300

40 JH441A

448130

# INSPECTION CERTIFICATE

JH441A

**UNYTITE, INC.**

One Unytite Drive  
Peru, Illinois 61354

815-224-2221 — FAX # 815-224-3434



Specification	Size	Quantity
ASTM A490 F2280 Type 1		
ASTM A563 Grade DH	1 - 8 UNC X 3	13,553 pcs.
ASTM F436 Type 1		

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

Date: Jan. 03, '07

BOLT LOT NO: JH441

Mechanical Property of Full Size Bolts				Chemical Composition %																
Tensile Strength	Proof Load	Hardness	Heat Treatment	IDENTIFICATION																
				C	Si	Mn	P	S	Cu	Ni	Cr	Mo	B							
90900	72700	34.5	1004		30															
104850	(length Method)		Quench		48															
99225	ALL PASS	34.5	1580	Heat No.	40	25	89	8	9	9	5	95	17	.1						

NUT LOT NO: BB251

Mechanical Property of Full Size Nuts				Chemical Composition %																
Hardness	After 24 hr	Proof Load	Heat Treatment	IDENTIFICATION																
				C	Si	Mn	P	S	Cu	Ni	Cr									
24-38	HRB 89	106050	850		20															
28.1	—	ALL PASS	1175		55															
Average		ALL PASS	1562	Heat No.	46	23	80	1.4	30	1.5	7	1.1								

WASHER LOT NO: WB8588

Mechanical Property of Full Size Washers				Chemical Composition %																
Hardness	3B - 45	Proof Load	Heat Treatment	IDENTIFICATION																
				C	Si	Mn	P	S	Cu	Ni	Cr									
38-45	HRB 89	106050	850		20															
42.5	—	ALL PASS	1175		55															
Average		ALL PASS	1562	Heat No.	46	23	80	1.4	30	1.5	7	1.1								

Material used for the bolt, nut and washer were melted & manufactured in the USA. The product was manufactured in the USA to ASTM specifications. The bolt and nut are manufactured by Unytite. We hereby certify that the material described has been manufactured and inspected satisfactory with requirement of the above specification.

Chief of Quality Assurance Section

*[Signature]*

Thread Accuracy (Bolt & Nut)		REMARKS
Bolt	ASME B1.1 Class 2A	
Nut	ASME B1.1 Class 2B	

Fastener Tension	
Spec. (lb.)	Min. 67200
Mean / 5 sets.	84256
Standard Deviation	877

LOAD



# CHARTER STEEL

## CHARTER STEEL TEST REPORT Reverse Has Text And Codes

A Division of  
Charter Manufacturing Company, Inc.

1658 Cold Springs Road  
Saukville, Wisconsin 53080  
(262) 268-2400  
1-800-437-8789  
FAX (262) 268-2570

UNYTITE, INC.  
ONE UNYTITE DRIVE  
PERU, IL 61354-  
Attn: ATTEN: JEAN MARGHERIO

Cust. P.O.	PO01080
Cust. Part#	C4140SCO.984A
Charter Sales Order	224214
Heat #	448130
Ship Lot #	500209
Grade#	4140 A SK FG RHQ
Process	DFSAR
Finish Size	0.984

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed below and on the reverse side, and that it satisfies those requirements.

### Test Results of Heat Lot# 448130

Lab Code: 7388											
Chemistry	C	MN	P	S	SI	NI	CR	MO	CU	SN	V
Wt%	0.40	0.89	0.008	0.009	0.250	0.05	0.95	0.17	0.09	0.008	0.001
	AL	N	B	TI	NB						
	0.023	0.0060	0.0001	0.001	0.002						

CHEM. DEVIATION EXT.-GREEN = N/R

### Test Results of Rolling Lot # 352084

QC DEVIATION EXT.-GREEN = N/R

### Test Results of Processing Lot # 500209

	# of Tests	Min Value	Max Value	Mean Value	
TENSILE (KSI)	3	91.1	92.5	91.7	TENSILE LAB = 0358-02
REDUCTION OF AREA (%)	3	54	62	58	RA LAB = 0358-02
ROCKWELL B (HRBW)	3	92	93	92	RB LAB = 0358-02
WIRE SIZE (Inches)	10	0.982	0.983	0.983	
WIRE OUT OF ROUND (Inches)	10	0.000	0.000	0.000	

NUM DECARB = 2 FREE FERRITE DECARB = 0.000 FREE FERR & PARTIAL DECARB = 0.004  
CP SPHERO % LAB = 0358-02 NUM SPHERO = 2 SPHERODIZATION (%) = 82.5  
QC DEVIATION EXT.-PROCESSED = N/R

Specifications: Meets customer specifications with any applicable Charter Steel exceptions for the following customer documents:  
Customer Document = UNYTITE RMS-003 Revision = 2 Dated =

Additional Comments:

Charter Steel  
Saukville, WI, USA



Tim Leahy  
Manager of Quality Assurance  
10/30/2006

Fax number: ( ) - Rem: Load1,Mail0,Fax0

The following statements are applicable to the material described on the front of this Test Report:

1. Except as noted, the steel supplied for this order was melted, rolled and processed in the United States.
2. Mercury was not used during the manufacture of this product; nor was the steel contaminated with mercury during processing.
3. Unless directed by the customer, there are no welds in any of the coils produced for this order.
4. The laboratory that generated the analytical or test results can be identified by the following key:

Certificate Number	Lab Code	Laboratory		Address
0358-01	7388	<b>CSMD</b>	Charter Steel Melting Division	1658 Cold Springs Road, Saukville, WI 53080
0358-02	8171	<b>CSR/D/ CSPD</b>	Charter Steel Rolling/ Processing Division	1658 Cold Springs Road, Saukville, WI 53080
0358-03	123633	<b>P4</b>	Charter Steel Ohio Processing Division	6255 US Highway 23, Risingsun, OH 43457
0358-04	125544	<b>CSC</b>	Charter Steel Cleveland	4300 E. 49 <sup>th</sup> St., Cuyahoga Heights, OH 44125-1004
*	*	—	Subcontracted test performed by laboratory not in Charter Steel system	

5. When run by a Charter Steel laboratory, the following tests were performed according to the latest revisions of the specifications listed below, as noted in the Charter Steel Laboratory Quality Manual:

Test	Possible Laboratory	Specification
Chemistry Analysis	CSMD	ASTM E415; ASTM E1019
Macroetch	CSMD	ASTM E381
Hardenability (Jominy)	CSMD	ASTM A255; JIS G0561
Grain Size	CSMD	ASTM E112
Tensile Test	CSR/D/CSPD, P4, CSC	ASTM E8; ASTM A370
Rockwell Hardness	CSR/D/CSPD, P4, CSC	ASTM E18; ASTM A370
Microstructure (spheroidization)	CSR/D/CSPD, P4	ASTM A892
Cleanliness	CSR/D/CSPD, CSC	ASTM E45

Charter Steel has been accredited to perform all of the above tests by the American Association for Laboratory Accreditation (A2LA). These accreditations expire 01/31/07.

All other test results associated with a Charter Steel laboratory that appear on the front of this report, if any, were performed according to documented procedures developed by Charter Steel and are not accredited by A2LA.

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8. This certification is given subject to the terms and conditions of sale provided in Charter Steel's acknowledgment (designated by our Purchase Order number) to the customer's purchase order. Both Purchase Order numbers appear on the front page of this Report.
9. Where the customer has provided a specification, the results on the front of this test report conform to that specification unless otherwise noted on this test report.



**MacSteel**

ONE JACKSON SQUARE  
SUITE 500  
JACKSON, MICHIGAN 49201

**CERTIFIED MATERIAL TEST REPORT**

<b>CUSTOMER ORDER NUMBER</b> 35869	<b>CUSTOMER PART NUMBER</b> B1045SC12500	<b>HEAT NUMBER</b> M20630	<b>WORK ORDER NUMBER</b> 39507 102	<b>DATE</b> 7/11/06
---------------------------------------	---	------------------------------	---------------------------------------	------------------------

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

**SHP TO**  
UNYTITE, INC.  
  
ONE UNYTITE DRIVE  
  
PERU , IL 61354

**ORDERED**

<b>GRADE</b> 1045	<b>SIZE</b> 1 1/4" RND	<b>LENGTH</b> 24' 10 1/2"
----------------------	---------------------------	------------------------------

**CUSTOMER SPECIFICATIONS**  
SAE 1045; ASTM E381-91

**CHEMICAL ANALYSIS - (BAR AVERAGE)**

C	Mn	P	S	Si	Ni	Cr	Mo	Cu	Sn	Al
0.46	0.80	0.014	0.030	0.23	0.07	0.11	0.03	0.15	0.006	0.004
V	Nb									
0.053	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-Arkansas  MacSteel-Monroe   
MacSteel-Michigan

*Chris Easter*

Quality Assurance Representative

CONTINUED ON PAGE 2



**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
35869	B1045SC12500	M20630	39507 102	7/11/06

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

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

**ORDERED**

GRADE	SIZE	LENGTH
1045	1 1/4" RND	24' 10 1/2"

**CUSTOMER SPECIFICATIONS**

SAE 1045; ASTM E381-91

**REDUCTION RATIO**

RATIO= 29.3 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-Arkansas  MacSteel-Monroe   
MacSteel-Michigan

**Chris Easter**

Quality Assurance Representative

B8588



640 Lavoy Road  
Erie, MI 48133  
Phone: 734/848-2915 Fax: 734/848-8734

# CERTIFICATE OF ANALYSIS

CUSTOMER ORDER NO: 14463	CERTIFICATION NO: 2-215069	SHIPPER NO: 2-215069	CERTIFIED DATE: 08/21/06
CUSTOMER PART NO: P2085HP400	DH	SIZE: .1360 x 5.5800 x	COIL
CUSTOMER:  PRESTIGE STAMPING INC. **  P O BOX 1086  WARREN MI 480901086		GRADE: SAE J403 1035	
COILS CERTIFIED AND MANUFACTURED IN THE U.S.A.			

ATTENTION:

~~All units of measurement for chemistry are in weight percent.~~

COIL NO.	HEAT NUMBER	CHEMISTRY AND MECHANICAL PROPERTIES
HT5901	9402601	C = 0.340 MN= 0.740 P = 0.010 S = 0.003 SI= 0.070 AL= 0.052 COMMENT:** MILL CERTIFICATION WITH LOAD **

## RECEIVED

AUG 29 2006

Time    

THE ABOVE MECHANICAL AND CHEMICAL ANALYSES WERE SUPPLIED BY THE PRODUCING MILL OR TESTED ON OUR OWN EQUIPMENT.  
Form No. 1-QC 001 Rev. 2

*[Signature]*  
Agent for Heidman Steel Products, Inc.

# HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17642

Invoice No. K09860

Invoice Date 01/25/07

Sales Order K09860

Cert No Inv Line No Item No

Quantity Lot No

Heat

Assembly No

Haydon PO  
A44772

31108 160000 PTF100275

20 JH421A

448130

# INSPECTION CERTIFICATE

JH421A

SET LOT NO.

**UNYTITE, INC.**

One Unytite Drive  
Peru, Illinois 61354

815-224-2221 — FAX # 815-224-3434



Specification	Size	Quantity
ASTM A490 F2280 Type 1	1 - 8 UNC X. 2-3/4	14,770 pcs.
ASTM A563 Grade DH		
ASTM F436 Type 1		

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

**BOLT LOT NO.** JH421 **Date:** Dec. 13, '06

Mechanical Property of Full Size Bolts				Chemical Composition %																	
Tensile Strength	Proof Load 72700 (Length Method)	Hardness	HRC	Heat Treatment		IDENTIFICATION															
				Quench	Temper	C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100	Mo x 100	B x 10,000						
90900	Max. +/- 0.0005 in.			1580	1004													30			
104850	Part of Screw					Heat No.															
99825	Part of Screw	ALL PASS	34.0	1580	1004	448130	40	25	89	8	9	9	5	95	17						

**NUT LOT NO.** BB651

Mechanical Property of Full Size Nuts				Chemical Composition %																	
Hardness (HRC)	After 24 hr x 1000° F HRB	Proof Load (Lbf)	HRC	Heat Treatment		IDENTIFICATION															
				Quench	Temper	C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100								
				850												20					
24-38	HRB 89	106050		Min.		Heat No.	60	40	50	23	21	9	11								
28.3	—	ALL PASS	1562	1184	1004	S77122	44	22	71	7	23	21	9	95	17						

**WASHER LOT NO.** WB8588

Mechanical Property of Full Size Washers				Chemical Composition %																	
Hardness (HRC)	38-45	Proof Load (Lbf)	HRC	Heat Treatment		IDENTIFICATION															
				Quench	Temper	C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100								
				850												20					
24-38	HRB 89	106050		Min.		Heat No.	60	40	50	23	21	9	11								
28.3	—	ALL PASS	1562	1184	1004	S77122	44	22	71	7	23	21	9	95	17						

Material used for the bolt, nut and washer were melted & manufactured in the USA. The product was manufactured in the USA to ASTM specifications. The bolt and nut are manufactured by Unytite. We hereby certify that the material described has been manufactured and inspected satisfactory with requirement of the above specification.

Chief of Quality Assurance Section

*[Signature]*

Thread Accuracy	REMARKS
Bolt	ASME B1.1 Class 2A
Nut	ASME B1.1 Class 2B
	THESE BOLTS HAVE BEEN MAGNETIC PARTICLE INSPECTION IN ACCORDANCE WITH THE REQUIREMENTS OF SPECIFICATION ASTM A490

LOAD



# CHARTER STEEL

## CHARTER STEEL TEST REPORT Reverse Has Text And Codes

A Division of  
Charter Manufacturing Company, Inc.

1658 Cold Springs Road  
Saukville, Wisconsin 53080

(262) 268-2400

1-800-437-8789

FAX (262) 268-2570

**UNYTITE, INC.**  
**ONE UNYTITE DRIVE**  
**PERU, IL 61354-**  
**Attn: ATTEN: JEAN MARGHERIO**

Cust. P.O.	PO01080
Cust Part#	C4140SCO.984A
Charter Sales Order	224214
Heat #	448130
Ship Lot #	500209
Grade#	4140 A SK FG RHQ
Process	DFSAR
Finish Size	0.984

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed below and on the reverse side, and that it satisfies those requirements.

### Test Results of Heat Lot# 448130

Lab Code: 7388	C	MN	P	S	SI	NI	CR	MO	CU	SN	V
Chemistry	0.40	0.89	0.008	0.009	0.250	0.05	0.95	0.17	0.09	0.008	0.001
Wt%											
	AL	N	B	TI	NB						
	0.023	0.0060	0.0001	0.001	0.002						

CHEM. DEVIATION EXT.-GREEN = N/R

### Test Results of Rolling Lot # 352084

QC DEVIATION EXT.-GREEN = N/R

### Test Results of Processing Lot # 500209

	# of Tests	Min Value	Max Value	Mean Value	
TENSILE (KSI)	3	91.1	92.5	91.7	TENSILE LAB = 0358-02
REDUCTION OF AREA (%)	3	54	62	58	RA LAB = 0358-02
ROCKWELL B (HRBW)	3	92	93	92	RB LAB = 0358-02
WIRE SIZE (Inches)	10	0.982	0.983	0.983	
WIRE OUT OF ROUND (Inches)	10	0.000	0.000	0.000	

NUM DECARB = 2    FREE FERRITE DECARB = 0.000    FREE FERR & PARTIAL DECARB = 0.004  
CP SPHERO % LAB = 0358-02    NUM SPHERO = 2    SPHERODIZATION (%) = 82.5  
QC DEVIATION EXT.-PROCESSED = N/R

Specifications:                      Meets customer specifications with any applicable Charter Steel exceptions for the following customer documents:  
Customer Document = UNYTITE RMS-003                      Revision = 2    Dated =

Additional Comments:

Charter Steel  
Saukville, WI, USA



Tim Leahy  
Manager of Quality Assurance  
10/30/2006

Fax number: ( ) -    Rem: Load 1, Mail 0, Fax 0

The following statements are applicable to the material described on the front of this Test Report:

1. Except as noted, the steel supplied for this order was melted, rolled and processed in the United States.
2. Mercury was not used during the manufacture of this product; nor was the steel contaminated with mercury during processing.
3. Unless directed by the customer, there are no welds in any of the coils produced for this order.
4. The laboratory that generated the analytical or test results can be identified by the following key:

Certificate Number	Lab Code	Laboratory		Address
0358-01	7388	<b>CSMD</b>	Charter Steel Melting Division	1658 Cold Springs Road, Saukville, WI 53080
0358-02	8171	<b>CSR/ CSPD</b>	Charter Steel Rolling/ Processing Division	1658 Cold Springs Road, Saukville, WI 53080
0358-03	123633	<b>P4</b>	Charter Steel Ohio Processing Division	6255 US Highway 23, Risingsun, OH 43457
0358-04	125544	<b>CSC</b>	Charter Steel Cleveland	4300 E. 49 <sup>th</sup> St., Cuyahoga Heights, OH 44125-1004
*	*	--	Subcontracted test performed by laboratory not in Charter Steel system	

5. When run by a Charter Steel laboratory, the following tests were performed according to the latest revisions of the specifications listed below, as noted in the Charter Steel Laboratory Quality Manual:

Test	Possible Laboratory	Specification
Chemistry Analysis	CSMD	ASTM E415; ASTM E1019
Macroetch	CSMD	ASTM E381
Hardenability (Jominy)	CSMD	ASTM A255; JIS G0561
Grain Size	CSMD	ASTM E112
Tensile Test	CSR/ CSPD, P4, CSC	ASTM E8; ASTM A370
Rockwell Hardness	CSR/ CSPD, P4, CSC	ASTM E18; ASTM A370
Microstructure (spheroidization)	CSR/ CSPD, P4	ASTM A892
Cleanliness	CSR/ CSPD, CSC	ASTM E45

Charter Steel has been accredited to perform all of the above tests by the American Association for Laboratory Accreditation (A2LA). These accreditations expire 01/31/07.

All other test results associated with a Charter Steel laboratory that appear on the front of this report, if any, were performed according to documented procedures developed by Charter Steel and are not accredited by A2LA.

6. The test results on the front of this report are the true values measured on the samples taken from the production lot. They do not apply to any other sample.
7. This test report cannot be reproduced or distributed except in full without the written permission of Charter Steel. The primary customer whose name and address appear on the front of this form may reproduce this test report, subject to the following restrictions:
  - It may be distributed only to their customers
  - Both sides of all pages must be reproduced in full
8. This certification is given subject to the terms and conditions of sale provided in Charter Steel's acknowledgment (designated by our Purchase Order number) to the customer's purchase order. Both Purchase Order numbers appear on the front page of this Report.
9. Where the customer has provided a specification, the results on the front of this test report conform to that specification unless otherwise noted on this test report.



**GERDAU AMERISTEEL**

ST PAUL STEEL MILL  
1678 RED ROCK ROAD  
ST PAUL MN 55119 USA  
(651) 731-5600

Chemical and Physical Test Report  
MADE IN UNITED STATES

M-033866

PRODUCED IN: ST PAUL

SHIP TO UNYTITE INC 1 UNYTITE DRIVE PERU, IL 61354	INVOICE TO UNYTITE INC 1 UNYTITE DRIVE PERU, IL 61354	SHIP DATE 11/13/06	CUST. ACCOUNT NO 70000042
---	--	-----------------------	------------------------------

SHAPE + SIZE R1 1/4SBO	GRADE C1045M23F	SPECIFICATION A576-90B(2000), A29/A29M-05	SALES ORDER 6072000-06	CUST P.O. NUMBER P001012-06
---------------------------	--------------------	--	---------------------------	--------------------------------

HEAT I.D. S77122	C .44	Mn .71	P .007	S .023	Si .22	Cu .21	Ni .09	Cr .11	Mb .030	V .027	Nb .002	N .0094	Sn .019	Al .002	Ti .00250	Ca .00130	Co .009
---------------------	----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	------------	-----------	------------	------------	------------	------------	--------------	--------------	------------

Mechanical Test: Red R 24.6 Std Dev'd ldi Diam: 1.359  
Cleanliness Test: FG(5-8), ROLL LOT M627631, VENDOR HEAT S77122, QUALITY PROG. MANUAL REV. 1, DTD 6/10/05

Grain Test: Jominy:	Fine	Grain Size, Units 5.0
------------------------	------	--------------------------

Customer Requirements	SOURCE: MINNESOTA BILLETS CASTING: STRAND CAST
CUST ITEM NUMBER:	B1045SC1.2500

*Debra L. Kariesch*



This material, including the billets, was produced and manufactured in the United States of America

*Shaskary*  
Bhaskar Yalamanchilli  
Quality Director  
Gerdau Ameristeel

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

Mgr. Metallurg. Svcs.  
ST PAUL STEEL MILL

Seller warrants that all material furnished shall comply with specifications subject to standard published manufacturing variations. NO OTHER WARRANTIES, EXPRESSED OR IMPLIED, ARE MADE BY THE SELLER, AND SPECIFICALLY EXCLUDED ARE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. In no event shall seller be liable for indirect, consequential or punitive damages arising out of or related to the materials furnished by seller. Any claim for damages for materials that do not conform to specifications must be made from buyer to seller immediately after delivery of same in order to allow the seller the opportunity to inspect the material in question.



**GERDAU AMERISTEEL™**

**Lead and Mercury Content of Steel**

Lead and mercury are not purposefully introduced in the Gerdau Ameristeel steel manufacturing process, and are not present at levels that would require disclosure on Material Safety Data Sheets. To the best of our knowledge, no mercury is present in our steel products.

Sincerely,

Gerdau Ameristeel

A. James Turner  
Director, Environment & Quality





**GERDAU AMERISTEEL™**

**Weld Repair of Finished Product**

We hereby certify that weld repair of finished products is not performed at Gerda Ameristeel.

Sincerely,

Gerda Ameristeel

A. James Turner  
Director, Environment & Quality

B8588



640 Lavoy Road  
Erie, MI 48133  
Phone: 734/848-2915 Fax: 734/848-8734

# CERTIFICATE OF ANALYSIS

CUSTOMER ORDER NO: 14463	CERTIFICATION NO: 2-215069	SHIPPER NO: 2-215069	CERTIFIED DATE: 08/21/06
CUSTOMER PART NO: P2085HP400	DH	SIZE: .1360 x 5.5800 x	COIL
CUSTOMER: PRESTIGE STAMPING INC. ** P O BOX 1086 WARREN MI 480901086		GRADE: SAE J403 1035	
COUNTRY OF ORIGIN AND MANUFACTURED IN THE U.S.A.			

ATTENTION:

~~All units of measurement for chemistry are in weight percent.~~

COIL NO.	HEAT NUMBER	CHEMISTRY AND MECHANICAL PROPERTIES
HT5901	9402601	C = 0.340 MN= 0.740 P = 0.010 S = 0.003 SI= 0.070. AL= 0.052
COMMENT: ** MILL CERTIFICATION WITH LOAD **		

## RECEIVED

AUG 29 2006

Time JK

THE ABOVE MECHANICAL AND CHEMICAL ANALYSES WERE SUPPLIED BY THE PRODUCING MILL OR TESTED ON OUR OWN EQUIPMENT.  
Form No. I-QC 001 Rev. 7

*[Signature]*  
Agent for Heidtman Steel Products, Inc.

# HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17642

Invoice No. K09860

Invoice Date 01/25/07

Sales Order K09860

Cert No Inv Line No Item No

Quantity Lot No

Assembly No Haydon PO

30696 · 170000 PTF100250

5 AZ981A

Heat 418210

A44772

# INSPECTION CERTIFICATE

AZ981A

**UNYRITE, INC.**

One Unyrite Drive  
Peru, Illinois 61354

815-224-2221 — FAX # 815-224-3434



Specification	Size	Quantity
ASTM A490 F2280 Type 1	1 - 8 UNC X 2-1/2	20,410 pcs.
ASTM A563 Grade DH		
ASTM F436 Type 1		

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

Date: Oct. 17, '06

BOLT LOT NO. AZ281

Mechanical Property of Full Size Bolts				Chemical Composition %									
Tensile Strength	Proof Load 72700 (length Method)	Hardness		C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100	Mo x 100	B x 10,000
		Position of fracture	HRC										
90900	Max.			30			Max. 40		Max. 40				
104850	+/- 0.0005 in.			48									
103475	ALL PASS		35.2	41	25	85	8	12	9	5	86	21	2
Average 8 pcs													



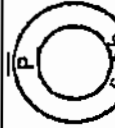
NUT LOT NO. AZ582

Mechanical Property of Full Size Nuts				Chemical Composition %									
Hardness (HRC)	Hardness After 24 hr x 1000° F HRB	Proof Load (Lbf)	Heat Treatment *F (°C)		C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100	
			Quench	Temper									
24 - 38	HRB 89	106050		850	20			Max. 40	Max. 50				
29.5	—	ALL PASS	1562	1202	55			40	50	24	27	16	
Mean/5 pcs					45	22	76	9	24	27	16	16	



WASHER LOT NO. WB7877

Mechanical Property of Full Size Washers				Chemical Composition %									
Hardness (HRC)	Hardness After 24 hr x 1000° F HRB	Proof Load (Lbf)	Heat Treatment *F (°C)		C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100	
			Quench	Temper									
38 - 45								Max. 40	Max. 50				
40.0	—	ALL PASS	1562	1202	35	8	72	10	2	50	10	548	
Mean/5 Pcs.													



Fastener Tension

Fastener Tension	Spec. (lb.)	Min.
	67200	79404
	Mean / 5 sets.	548

Mechanical Property of Full Size Washers				Chemical Composition %									
Hardness (HRC)	Hardness After 24 hr x 1000° F HRB	Proof Load (Lbf)	Heat Treatment *F (°C)		C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100	
			Quench	Temper									
38 - 45								Max. 40	Max. 50				
40.0	—	ALL PASS	1562	1202	35	8	72	10	2	50	10	548	
Mean/5 Pcs.													

OFFICIAL SEAL  
JEAN MARGHERIO  
NOTARY PUBLIC - STATE OF ILLINOIS  
MY COMMISSION EXPIRES: 01/18/09

Material used for the bolt, nut and washer were melted & manufactured in the USA. The product was manufactured in the USA to ASTM specifications. The bolt and nut are manufactured by Unyrite. We hereby certify that the material described has been manufactured and inspected satisfactory with requirement of the above specification.

Chief of Quality Assurance Section

*[Signature]*

10/20/06

Thread Accuracy (Bolt & Nut)	REMARKS
Bolt ASME B1.1 Class 2A Nut ASME B1.1 Class 2B	THESE BOLTS HAVE BEEN MAGNETIC PARTICLE INSPECTION IN ACCORDANCE WITH THE REQUIREMENTS OF SPECIFICATION ASTM A490

LOAD



# CHARTER STEEL

## CHARTER STEEL TEST REPORT Reverse Has Text And Codes

A Division of  
Charter Manufacturing Company, Inc.

1658 Cold Springs Road  
Saukville, Wisconsin 53080

(262) 268-2400

1-800-437-8789

FAX (262) 268-2570

UNYTITE, INC.  
ONE UNYTITE DRIVE  
PERU, IL 61354-  
Attn: ATTN: JEAN MARGHERIO

Cust. P.O.	33448
Cust Part#	C4140SCO.984A
Charter Sales Order	210714
Heat #	418210
Ship Lot #	485995
Grade#	4140 A SK FG RHQ
Process	DFSAR
Finish Size	0.984

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed below and on the reverse side, and that it satisfies those requirements.

### Test Results of Heat Lot# 418210

LAB CODE: 7388

Chemistry	C	MN	P	S	SI	NI	CR	MO	CU	SN	V
Wt%	0.41	0.85	0.008	0.012	0.250	0.05	0.86	0.21	0.09	0.008	0.001

AL	N	B	TI	NB
0.023	0.0070	0.0002	0.002	0.002

CHEM. DEVIATION EXT.-GREEN = N/R

### Test Results of Rolling Lot # 339035

QC DEVIATION EXT.-GREEN = N/R

### Test Results of Processing Lot # 485995

	# of Tests	Min Value	Max Value	Mean Value
TENSILE (KSI)	3	93.1	93.5	93.4
REDUCTION OF AREA (%)	3	61	62	61
ROCKWELL B (HRBW)	3	79	83	82
WIRE SIZE (Inches)	9	0.982	0.983	0.982
WIRE OUT OF ROUND (Inches)	9	0.000	0.001	0.000

TENSILE LAB = 0358-02  
RA LAB = 0358-02  
RB LAB = 0358-02

NUM DECARB = 2      FREE FERRITE DECARB = 0.000      FREE FERR & PARTIAL DECARB = 0.000  
CP SPHERO % LAB = 0358-02      NUM SPHERO = 2      SPHERODIZATION (%) = 82.5  
QC DEVIATION EXT.-PROCESSED = N/R

Specifications: Meets customer specifications with any applicable Charter Steel exceptions for the following customer documents:  
Customer Document = UNYTITE RMS-003      Revision = 2      Dated =

Charter Steel  
Saukville, WI, USA

Fax number: ( )      Rem: Load1,Mail0,Fax0



Tim Leahy  
Manager of Quality Assurance  
05/10/2006

The following statements are applicable to the material described on the front of this Test Report:

1. Except as noted, the steel supplied for this order was melted, rolled and processed in the United States.
2. Mercury was not used during the manufacture of this product; nor was the steel contaminated with mercury during processing.
3. Unless directed by the customer, there are no welds in any of the coils produced for this order.
4. The laboratory that generated the analytical or test results can be identified by the following key:

Certificate Number	Lab Code	Laboratory		Address
0358-01	7388	<b>CSMD</b>	Charter Steel Melting Division	1658 Cold Springs Road, Saukville, WI 53080
0358-02	8171	<b>CSR/D/ CSPD</b>	Charter Steel Rolling/ Processing Division	1658 Cold Springs Road, Saukville, WI 53080
0358-03	123633	<b>P4</b>	Charter Steel Ohio Processing Division	6255 US Highway 23, Risingsun, OH 43457
0358-04	125544	<b>CSC</b>	Charter Steel Cleveland	4300 E. 49 <sup>th</sup> St., Cuyahoga Heights, OH 44125-1004
.	.	--	Subcontracted test performed by laboratory not in Charter Steel system	

5. When run by a Charter Steel laboratory, the following tests were performed according to the latest revisions of the specifications listed below, as noted in the Charter Steel Laboratory Quality Manual:

Test	Possible Laboratory	Specification
Chemistry Analysis	CSMD	ASTM E415; ASTM E1019
Macroetch	CSMD	ASTM E381
Hardenability (Jominy)	CSMD	ASTM A255; JIS G0561
Grain Size	CSMD	ASTM E112
Tensile Test	CSR/D/CSPD, P4, CSC	ASTM E8; ASTM A370
Rockwell Hardness	CSR/D/CSPD, P4, CSC	ASTM E18; ASTM A370
Microstructure (spheroidization)	CSR/D/CSPD, P4	ASTM A892
Cleanliness	CSR/D/CSPD, CSC	ASTM E45

Charter Steel has been accredited to perform all of the above tests by the American Association for Laboratory Accreditation (A2LA). These accreditations expire 01/31/07.

All other test results associated with a Charter Steel laboratory that appear on the front of this report, if any, were performed according to documented procedures developed by Charter Steel and are not accredited by A2LA.

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8. This certification is given subject to the terms and conditions of sale provided in Charter Steel's acknowledgment (designated by our Purchase Order number) to the customer's purchase order. Both Purchase Order numbers appear on the front page of this Report.
9. Where the customer has provided a specification, the results on the front of this test report conform to that specification unless otherwise noted on this test report.



M623215

P.O Box 64189  
1678 Red Rock Road  
Saint Paul, Minnesota 55164

Heat #: S75179  
Size: 1 1/4  
Product: Round Bar  
Grade: C1045M23FC  
Date Rolled: 03-22-2006  
P.O 3 3407  
M.O #: 601408803  
lgth 24'10"

# CERTIFIED TEST REPORT

## CHEMICAL ANALYSIS (WT %)

C	Mn	P	S	Si	Sn	Cu	Ni	Cr	Mo	Cb	V	Co	Al	Ti	Ca ppm	N ppm
0.45	.76	0.009	0.024	0.22	0.027	0.27	0.16	0.16	0.04	0.001	0.026	0.01	0.002	0.0032	16	84

MATERIAL 100% MELTED AND ROLLED IN THE USA. MANUFACTURING PROCESSES FOR THIS STEEL, WHICH MAY INCLUDE SCRAP MELTED IN AN ELECTRIC ARC FURNACE AND HOT ROLLING, HAVE BEEN PERFORMED AT GERDAU AMERISTEEL MINNESOTA, 1678 RED ROCK ROAD, SAINT PAUL MINNESOTA, USA. ALL PRODUCT PRODUCED FROM STRAND CAST BILLETS. NO WELD REPAIRMENT PERFORMED. STEEL NOT EXPOSED TO MERCURY OR ANY LIQUID ALLOY WHICH IS LIQUID AT AMBIENT TEMPERATURES DURING PROCESSING OR WHILE IN GERDAU AMERISTEEL MINNESOTA POSSESSION.

## 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

## MECHANICAL TEST REPORT

SPECIMEN AREA (in <sup>2</sup> )	YIELD (Klps)	YIELD (Ksi)	TENSILE (Klps)	TENSILE (Ksi)	GAUGE LENGTH (in)	% ELONG	BEND	% R.A.

Additional Specifications/Comments:  
A576-90b (2000)  
A29/A29M-05

Quality Program Manual Rev. 1 dtd 6/10/05

Grain Size: <u>Fine</u>	Reduction Ratio: <u>24.6:1</u>	C.E Per: <u></u>	As Rolled surface Hardness
Coding: <u></u>	D.I: <u>1.68</u> in. Ms: <u>601.4</u> Deg F.	C.E: <u></u>	HBW   HRc
			Test 1: <u></u>
			Test 2: <u></u>

CHARPY IMPACT TEST		
*	Test 1	Test 2
Temp (F)		
ft-lb 1		
ft-lb 2		
ft-lb 3		

ASTM E45 is not a laboratory accredited test.

Micro Clean Average

At:  Ab:  Bt:  Bh:  Ct:  Ch:  Dt:  Dh:  S-Rating:  O-Rating:

Macro Etch:

Accredited to:	ASTM Test Method									
	ASTM A370	ASTM E8	ASTM E10	ASTM E18	ASTM E23	ASTM E112	ASTM E255	ASTM E290	ASTM E415	ASTM E1019
ISO 17025	X	X	X	X				X	X	X
subcontractor (ISO 170 25)		*			*	*	*			

The above results relate only to the items tested.

Chemical tests performed in accordance with ASTM E415 and E1019. Mechanical tests performed in accordance to ASTM E8, E10, E18, E290 and A370. All other tests performed in accordance with the requirements of applicable specifications unless otherwise noted above. We hereby certify that the above test results are representative of those contained in the records of the company.

Any modification to this certificate as provided by Gerdau Ameristeel - Minnesota without the expressed written consent of Gerdau Ameristeel - Minnesota negates the validity of this test report. This report shall not be reproduced except in full, without the expressed written consent of Gerdau Ameristeel Minnesota. Gerdau Ameristeel - Minnesota is not responsible for the inability of this material to meet specific applications.

X Gerdau Ameristeel Minnesota, A2LA Certification #1055-01 Exp. 6/30/06

\* Denotes Testing By Sub-Contractor:  
Metallurgical Services Inc., A2LA Certification #510-01 Exp. 12/31/06  
Stork Twin City Testing, A2LA Certification #1479-01 Exp 12/31/06

Measurement of uncertainty information is available upon request.

SIGNED: \_\_\_\_\_  
DATE: 07-31-2006  
APPROVAL: \_\_\_\_\_

**QA Approval**

*K. Wong*

**Ken Wong**

SWORN AND SUBSCRIBED TO BEFORE ME

THIS 31 DAY July 2006

*Debra Kames*

THIS CERTIFICATE IS VOID IF ANY CHANGES ARE REQUESTED.

Notary Public-Minnesota  
My Commission Expires Jan 31, 2010



640 Lavoy Road  
 Erie, MI 48133  
 Phone: 734/848-2915

Fax: 734/848-8734

LOT  
 B7877

B7877

**CERTIFICATE  
 OF  
 ANALYSIS**

CUSTOMER ORDER No: 13885	CERTIFICATION No: 2 -206893	SHIPPER No: 2 -206893	CERTIFIED DATE: 02/09/06
CUSTOMER PART No: P2085H00	AD	Size: .1360 x 5.7340 x	COIL
CUSTOMER:  PRESTIGE STAMPING INC. **  P O BOX 1086  WARREN MI 480901086		GRADE: SAE J403 1035  COATING SPECIFICATION: MELTED AND MANUFACTURED IN THE U.S.A.	

ATTENTION:

~~All units of measurement for chemistry are in weight percent.~~

COIL NO.	HEAT NUMBER	CHEMISTRY AND MECHANICAL PROPERTIES
GE5502	9501779	C = 0.350 MN= 0.720 P = 0.010 S = 0.002 SI= 0.080 AL= 0.052
COMMENT:** MILL CERTIFICATION WITH LOAD **		

**RECEIVED**

FEB 13 2006

THE ABOVE MECHANICAL AND CHEMICAL ANALYSES WERE SUPPLIED  
 BY THE PRODUCING MILL OR TESTED ON OUR OWN EQUIPMENT.  
 Form No. FQC 001 Rev. 1

*[Signature]*  
 Heidman Steel Products, Inc.



# HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17642

Invoice No. K09860

Invoice Date 01/25/07

Sales Order K09860

Cert No Inv Line No Item No

Quantity Lot No

Assembly No

Haydon PO

31054 . 180000 PTF100225

10 JH381A

Heat 448130

A44772

# INSPECTION CERTIFICATE

SET LOT NO. JH381A

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



Specification	Size	Quantity
ASTM A490 F2280 Type 1 ASTM A563 Grade DH ASTM F436 Type 1	1 - 8 UNC X 2-1/4	15,320 pcs.

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

BOLT LOT NO. JH381

Date: Dec. 12, '06

Mechanical Property of Full Size Bolts				Chemical Composition %											
Tensile Strength	Proof Load	Hardness	Heat Treatment	IDENTIFICATION		C	Si	Mn	P	S	Cu	Ni	Cr	Mo	B
				Load (lbf)	Position of fracture										
90900	72700	HRC	995		Heat No.	30									
104850	Max. +/- 0.0005 in.		800			48									
ALL PASS	ALL PASS	34.9	1580	448130		40	25	89	8	9	9	5	95	17	1
Spec.															
Average 8 pcs															

NUT LOT NO. BB651

Mechanical Property of Full Size Nuts				Chemical Composition %										
Hardness (HRC)	Hardness After 24 hr. x 1000° F HRB	Proof Load (lbf)	Heat Treatment	IDENTIFICATION		C	Si	Mn	P	S	Cu	Ni	Cr	Thread Accuracy (Bolt & Nut)
				Quench	Temper									
24-38	HRB 89	106050	850		Heat No.	20								Bolt ASME B1.1 Class 2A Nut ASME B1.1 Class 2B
28.3	—	ALL PASS	1184			55								
Spec.				S77122		44	22	71	7	23	21	9	11	
Mean/5pcs														

WASHER LOT NO. WB8588

Mechanical Property of Full Size Washers				Chemical Composition %										Fastener Tension		
Hardness (HRC)	Hardness	Proof Load (lbf)	Heat Treatment	IDENTIFICATION		C	Si	Mn	P	S	Cu	Ni	Cr	Fastener Tension Spec. (lbf.)	Min.	REMARKS
				Quench	Temper											
38-45	HRB 89	106050	850		Heat No.	20								67200	77784	THESE BOLTS HAVE BEEN MAGNETIC PARTICLE INSPECTED IN ACCORDANCE WITH THE REQUIREMENTS OF SPECIFICATION ASTM A490
42.5	—	ALL PASS	1184			55										
Spec.				S77122		44	22	71	7	23	21	9	11			
Mean/5 Pcs.																

Material used for the bolt, nut and washer were melted & manufactured in the USA. The product was manufactured in the USA to ASTM specifications. The bolt and nut are manufactured by Unytite. We hereby certify that the material described has been manufactured and inspected satisfactory with requirement of the above specification.

Chief of Quality Assurance Section

*[Signature]*

12-13-06

NOTARY PUBLIC - STATE OF ILLINOIS  
 MY COMMISSION EXPIRES: 11/18/09  
 OFFICIAL SEAL  
 JEAN MARGHERIO

LOAD



# CHARTER STEEL

## CHARTER STEEL TEST REPORT Reverse Has Text And Codes

A Division of  
Charter Manufacturing Company, Inc.

1658 Cold Springs Road  
Saukville, Wisconsin 53080  
(262) 268-2400  
1-800-437-8789  
FAX (262) 268-2570

UNYTITE, INC.  
ONE UNYTITE DRIVE  
PERU, IL 61354-  
Attn: ATTEN: JEAN MARGHERIO

Cust. P.O.	PO01080
Cust Part#	C4140SCO.984A
Charter Sales Order	224214
Heat #	448130
Ship Lot #	500209
Grade#	4140 A SK FG RHQ
Process	DFSAR
Finish Size	0.984

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed below and on the reverse side, and that it satisfies those requirements.

Test Results of Heat Lot# 448130

Lab Code: 7388											
Chemistry	C	MN	P	S	SI	NI	CR	MO	CU	SN	V
Wt%	0.40	0.89	0.008	0.009	0.250	0.05	0.95	0.17	0.09	0.008	0.001
	AL	N	B	TI	NB						
	0.023	0.0060	0.0001	0.001	0.002						

CHEM. DEVIATION EXT.-GREEN = N/R

Test Results of Rolling Lot # 352084

QC DEVIATION EXT.-GREEN = N/R

Test Results of Processing Lot # 500209

	# of Tests	Min Value	Max Value	Mean Value	
TENSILE (KSI)	3	91.1	92.5	91.7	TENSILE LAB = 0358-02
REDUCTION OF AREA (%)	3	54	62	58	RA LAB = 0358-02
ROCKWELL B (HRBW)	3	92	93	92	RB LAB = 0358-02
WIRE SIZE (Inches)	10	0.982	0.983	0.983	
WIRE OUT OF ROUND (Inches)	10	0.000	0.000	0.000	

NUM DECARB = 2 FREE FERRITE DECARB = 0.000 FREE FERR & PARTIAL DECARB = 0.004  
CP SPHERO % LAB = 0358-02 NUM SPHERO = 2 SPHERODIZATION (%) = 82.5  
QC DEVIATION EXT.-PROCESSED = N/R

Specifications: Meets customer specifications with any applicable Charter Steel exceptions for the following customer documents:  
Customer Document = UNYTITE RMS-003 Revision = 2 Dated =

Additional Comments:

Charter Steel  
Saukville, WI, USA



*Tim Leahy*  
Tim Leahy  
Manager of Quality Assurance  
10/30/2006

Fax number: ( ) - Rem: Load1,Mail0,Fax0

The following statements are applicable to the material described on the front of this Test Report:

1. Except as noted, the steel supplied for this order was melted, rolled and processed in the United States.
2. Mercury was not used during the manufacture of this product; nor was the steel contaminated with mercury during processing.
3. Unless directed by the customer, there are no welds in any of the coils produced for this order.
4. The laboratory that generated the analytical or test results can be identified by the following key:

Certificate Number	Lab Code	Laboratory		Address
0358-01	7388	CSMD	Charter Steel Melting Division	1658 Cold Springs Road, Saukville, WI 53080
0358-02	8171	CSR/D/ CSPD	Charter Steel Rolling/ Processing Division	1658 Cold Springs Road, Saukville, WI 53080
0358-03	123633	P4	Charter Steel Ohio Processing Division	6255 US Highway 23, Risingsun, OH 43457
0358-04	125544	CSC	Charter Steel Cleveland	4300 E. 49 <sup>th</sup> St., Cuyahoga Heights, OH 44125-1004
*	*	-	Subcontracted test performed by laboratory not in Charter Steel system	

5. When run by a Charter Steel laboratory, the following tests were performed according to the latest revisions of the specifications listed below, as noted in the Charter Steel Laboratory Quality Manual:

Test	Possible Laboratory	Specification
Chemistry Analysis	CSMD	ASTM E415; ASTM E1019
Macroetch	CSMD	ASTM E381
Hardenability (Jominy)	CSMD	ASTM A255; JIS G0561
Grain Size	CSMD	ASTM E112
Tensile Test	CSR/D/CSPD, P4, CSC	ASTM E8; ASTM A370
Rockwell Hardness	CSR/D/CSPD, P4, CSC	ASTM E18; ASTM A370
Microstructure (spheroidization)	CSR/D/CSPD, P4	ASTM A892
Cleanliness	CSR/D/CSPD, CSC	ASTM E45

Charter Steel has been accredited to perform all of the above tests by the American Association for Laboratory Accreditation (A2LA). These accreditations expire 01/31/07.

All other test results associated with a Charter Steel laboratory that appear on the front of this report, if any, were performed according to documented procedures developed by Charter Steel and are not accredited by A2LA.

6. The test results on the front of this report are the true values measured on the samples taken from the production lot. They do not apply to any other sample.
7. This test report cannot be reproduced or distributed except in full without the written permission of Charter Steel. The primary customer whose name and address appear on the front of this form may reproduce this test report, subject to the following restrictions:
  - It may be distributed only to their customers
  - Both sides of all pages must be reproduced in full
8. This certification is given subject to the terms and conditions of sale provided in Charter Steel's acknowledgment (designated by our Purchase Order number) to the customer's purchase order. Both Purchase Order numbers appear on the front page of this Report.
9. Where the customer has provided a specification, the results on the front of this test report conform to that specification unless otherwise noted on this test report.



**GERDAU AMERISTEEL**

ST PAUL STEEL MILL  
1678 RED ROCK ROAD  
ST PAUL MN 55119 USA  
(651) 731-5600

Chemical and Physical Test Report  
MADE IN UNITED STATES

M-033866

PRODUCED IN: ST PAUL

SHIP TO UNYTITE INC 1 UNYTITE DRIVE PERU, IL 61354	INVOICE TO UNYTITE INC 1 UNYTITE DRIVE PERU, IL 61354	SHIP DATE 11/13/06	CUST. ACCOUNT NO 70000042
---	--	-----------------------	------------------------------

SHAPE + SIZE R1 1/4S8Q	GRADE C1045M23F	SPECIFICATION A576-90B(2000), A29/A29M-05	SALES ORDER 6072003-06	CUST P.O. NUMBER P001012-06															
HEAT ID. S77122	C .44	Mn .71	P .007	S .023	Si .22	Ti .01	Cr .11	Ni .09	Cu .21	Nb .002	V .027	Mo .030	Co .009	Ca .00250	Al .002	Sn .019	N .0094	As .00250	Se .009

Mechanical Test: Red R 24.6 Sid Dev: 0 ldl Diam: 1.358

Cleanliness Test

FG(S-8), ROLL LOT M627631, VENDOR HEAT S77122 QUALITY PROG. MANUAL REV. 1, DTD 6/10/05

Fine

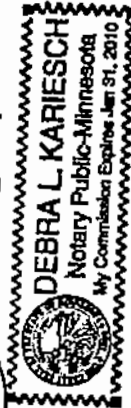
Grain Size Units 5.0

J1	J2	J3	J4	J5	J6	J7	J8	J9	J10	J12	J14	J16	J18	J20	J24	J28	J32
58	54	46	34	28.5	25	24	23	22	21	19	19	18	17	16	15	14	14

Customer Requirements SOURCE: MINNESOTA BILLETS CASTING; STRAND CAST

CUST ITEM NUMBER: B104SSC1-2500

*Debra L Kariesch*



This material, including the billets, was produced and manufactured in the United States of America

Bhaskar Yalamanchilli  
Quality Director  
Gerdau Ameristeel

*Bhaskar*

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

Mgr. Metallurg. Svcs.  
ST PAUL STEEL MILL

Seller warrants that all material furnished shall comply with specifications subject to standard published manufacturing variations. NO OTHER WARRANTIES, EXPRESSED OR IMPLIED, ARE MADE BY THE SELLER, AND SPECIFICALLY EXCLUDED ARE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

In no event shall seller be liable for indirect, consequential or punitive damages arising out of or related to the materials furnished by seller.

Any claim for damages for materials that do not conform to specifications must be made from buyer to seller immediately after delivery of same in order to allow the seller the opportunity to inspect the material in question.



**GERDAU AMERISTEEL**<sup>TM</sup>

**Lead and Mercury Content of Steel**

Lead and mercury are not purposefully introduced in the Gerdau Ameristeel steel manufacturing process, and are not present at levels that would require disclosure on Material Safety Data Sheets. To the best of our knowledge, no mercury is present in our steel products.

Sincerely,

Gerdau Ameristeel

A. James Turner  
Director, Environment & Quality



**GERDAU AMERISTEEL™**

**Weld Repair of Finished Product**

We hereby certify that weld repair of finished products is not performed at Gerda Ameristeel.

Sincerely,

Gerda Ameristeel

A. James Turner  
Director, Environment & Quality



640 Lavoy Road  
Erie, MI 48133  
Phone: 734/848-2915 Fax: 734/848-8734

001/007

B8588-

# CERTIFICATE OF ANALYSIS

CUSTOMER ORDER NO: 14463	CERTIFICATION NO: 2 -215069	SHIPPER NO: 2 -215069	CERTIFIED DATE: 08/21/06
CUSTOMER PART NO: P2085HP400	DH	SIZE: .1360 x 5.5800 x	COIL
CUSTOMER:  PRESTIGE STAMPING INC. **  P O BOX 1086  WARREN MI 480901086		GRADE: SAE J403 1035	
COILS PRODUCED AND MANUFACTURED IN THE U.S.A.			

ATTENTION:

~~All units of measurement for chemistry are in weight percent.~~

COIL NO. HEAT NUMBER CHEMISTRY AND MECHANICAL PROPERTIES

HT5901 9402601 C = 0.340 MN= 0.740 P = 0.010 S = 0.003 SI= 0.070  
AL= 0.052

COMMENT: \*\* MILL CERTIFICATION WITH LOAD \*\*

## RECEIVED

AUG 29 2006

Time JA

THE ABOVE MECHANICAL AND CHEMICAL ANALYSES WERE SUPPLIED BY THE PRODUCING MILL OR TESTED ON OUR OWN EQUIPMENT.  
Form No. IQC 001 Rev. 2

Agent for Heidtman Steel Products, Inc.



# HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17642

Invoice No. K09860

Invoice Date 01/25/07

Sales Order K09860

Cert No Inv Line No Item No

Quantity Lot No

Heat

Assembly No

Haydon PO

30507 · 200000 PTU087200

5 BC601A

444230

A44771

BC601A

# INSPECTION CERTIFICATE

SET LOT NO.

Specification	Size	Quantity
ASTM F1852 Type 1 ASTM A563 Grade DH ASTM F436 Type 1	7/8 - 9 UNC X 2	23,425 pcs.



**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

Date: NOV. 04, '06

BOLT LOT NO. BC601

	Mechanical Property of Full Size Bolts			Heat Treatment		IDENTIFICATION	Chemical Composition %									
	Tensile Strength	Proof Load	Hardness	Quench	Temper		C	Si	Mn	P	S	Cu	Ni	Cr	Mo	B
Spec.	55450	47-0.0005 in	34 MAX		Min. 800		30	15	Min.	Max.						
							52	30	60	40	50					
Average	71500	ALL PASS	31.8	1580	851	444230	32	25	75	7	6	9	5	6	1	30

NUT LOT NO. AC121

	Mechanical Property of Full Size Nuts			Heat Treatment		IDENTIFICATION	Chemical Composition %									
	Hardness	Proof Load	Hardness	Quench	Temper		C	Si	Mn	P	S	Cu	Ni	Cr		
Spec.	24-38	69300	HRB 89		Min. 800		20		Min.	Max.						
							55		60	40	50					
Mean/5 pcs	29.1	ALL PASS	1562	1076	599494	46	22	62	8	21	13	6	15			

WASHER LOT NO. WB8418

	Mechanical Property of Full Size Washers			Heat Treatment		IDENTIFICATION	Chemical Composition %									
	Hardness	Proof Load	Hardness	Quench	Temper		C	Si	Mn	P	S	Cu	Ni	Cr		
Spec.	38-45				Min. 800											
Mean/5 Pcs	42.0	9402803	34	10	72	11	2									

Material used for the bolt, nut and washer were melted & manufactured in the USA. The product was manufactured in the USA to ASTM specifications. The bolt and nut are manufactured by Unytite. We hereby certify that the material described has been manufactured and inspected satisfactory with requirement of the above specification.

*[Signature]*  
Chief of Quality Assurance Section

Thread Accuracy	(Bolt & Nut)
Bolt	ASME B1.1 Class 2A
Nut	ANSI B1.1 Class 2B
0.0222	

Fastener Tension	Fastener Tension	
	Spec. (lbf)	Min.
Mean / 6 sets.	50230	41000
Standard Deviation	1894	

REMARKS: *[Handwritten signature]*  
OFFICIAL SEAL  
JEAN MARGHERIO  
NOTARY PUBLIC - STATE OF ILLINOIS  
MY COMMISSION EXPIRES: 10/18/09  
11-06-06



# CHARTER STEEL

## CHARTER STEEL TEST REPORT Reverse Has Text And Codes

A Division of  
Charter Manufacturing Company, Inc.

1658 Cold Springs Road  
Saukville, Wisconsin 53080  
(262) 268-2400  
1-800-437-8789  
FAX (262) 268-2570

**UNYTITE, INC.**  
**ONE UNYTITE DRIVE**  
**PERU, IL 61354-**  
**Attn: ATTEN: JEAN MARGHERIO**

Cust. P.O.	29647
Cust Part#	C10B30SCO.856D
Charter Sales Order	177724
Heat #	444230
Ship Lot #	300374
Grade#	10B30 M SK FG RHQ
Process	DD
Finish Size	0.856

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed below and on the reverse side, and that it satisfies those requirements.

**Test Results of Heat Lot# 444230**

Lab Code: 7388												
Chemistry	C	MN	P	S	SI	NI	CR	MO	CU	SN	V	
Wt%	0.32	0.75	0.007	0.006	0.250	0.05	0.06	0.01	0.09	0.007	0.001	
	AL	N	B	TI	NB							
	0.024	0.0070	0.0030	0.020	0.001							
Jominy (HRC)	JOM01	JOM02	JOM03	JOM04	JOM05	JOM06	JOM07	JOM08	JOM09	JOM10	JOM11	JOM12
	53	51	51	43	27	23	22	21	20	20	0	0
	JOM13	JOM14	JOM15	JOM16	JOM18	JOM20	JOM22	JOM24	JOM26	JOM28	JOM30	JOM32
	0	0	0	0	0	0	0	0	0	0	0	0

JOMINY SAMPLE TYPE ENGLISH = R JOMINY LAB = 0358-01  
CHEM. DEVIATION EXT.-GREEN = N/R  
E45 INCLUSION LAB = 0358-02

Cleanliness	ASTM-E45 Method A				
	A	B	C	D	
	Thin	0.5	0.5	0.0	0.5
	Heavy	0.0	0.0	0.0	0.0

**Test Results of Rolling Lot # 350504**

QC DEVIATION EXT.-GREEN = N/R

**Test Results of Processing Lot # 300374**

	# of Tests	Min Value	Max Value	Mean Value	
TENSILE (KSI)	3	97.9	98.4	98.2	TENSILE LAB = 0358-02
REDUCTION OF AREA (%)	3	49	51	50	RA LAB = 0358-02
ROCKWELL B (HRBW)	3	91	93	92	RB LAB = 0358-02
WIRE SIZE (Inches)	8	0.855	0.856	0.855	
WIRE OUT OF ROUND (Inches)	8	0.000	0.000	0.000	
QC DEVIATION EXT.-PROCESSED = N/R					

Specifications: Meets customer specifications with any applicable Charter Steel exceptions for the following customer documents:  
Customer Document = UNYTITE Revision = 5 Dated = 8-MAY-2003

Additional Comments:

Charter Steel  
Saukville, WI, USA



*Tim Leahy*  
Tim Leahy  
Manager of Quality Assurance  
10/23/2006

The following statements are applicable to the material described on the front of this Test Report:

1. Except as noted, the steel supplied for this order was melted, rolled and processed in the United States.
2. Mercury was not used during the manufacture of this product; nor was the steel contaminated with mercury during processing.
3. Unless directed by the customer, there are no welds in any of the coils produced for this order.
4. The laboratory that generated the analytical or test results can be identified by the following key:

Certificate Number	Lab Code	Laboratory		Address
0358-01	7388	<b>CSMD</b>	Charter Steel Melting Division	1658 Cold Springs Road, Saukville, WI 53080
0358-02	8171	<b>CSR/ CSPD</b>	Charter Steel Rolling/ Processing Division	1658 Cold Springs Road, Saukville, WI 53080
0358-03	123633	<b>P4</b>	Charter Steel Ohio Processing Division	6255 US Highway 23, Risingsun, OH 43457
0358-04	125544	<b>CSC</b>	Charter Steel Cleveland	4300 E. 49 <sup>th</sup> St., Cuyahoga Heights, OH 44125-1004
*	*	--	Subcontracted test performed by laboratory not in Charter Steel system	

5. When run by a Charter Steel laboratory, the following tests were performed according to the latest revisions of the specifications listed below, as noted in the Charter Steel Laboratory Quality Manual:

Test	Possible Laboratory	Specification
Chemistry Analysis	CSMD	ASTM E415; ASTM E1019
Macroetch	CSMD	ASTM E381
Hardenability (Jominy)	CSMD	ASTM A255; JIS G0561
Grain Size	CSMD	ASTM E112
Tensile Test	CSR/CSR/CSR, P4, CSC	ASTM E8; ASTM A370
Rockwell Hardness	CSR/CSR/CSR, P4, CSC	ASTM E18; ASTM A370
Microstructure (spheroidization)	CSR/CSR/CSR, P4	ASTM A892
Cleanliness	CSR/CSR/CSR, CSC	ASTM E45

Charter Steel has been accredited to perform all of the above tests by the American Association for Laboratory Accreditation (A2LA). These accreditations expire 01/31/07.

All other test results associated with a Charter Steel laboratory that appear on the front of this report, if any, were performed according to documented procedures developed by Charter Steel and are not accredited by A2LA.

6. The test results on the front of this report are the true values measured on the samples taken from the production lot. They do not apply to any other sample.
7. This test report cannot be reproduced or distributed except in full without the written permission of Charter Steel. The primary customer whose name and address appear on the front of this form may reproduce this test report, subject to the following restrictions:
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  - Both sides of all pages must be reproduced in full.
8. This certification is given subject to the terms and conditions of sale provided in Charter Steel's acknowledgment (designated by our Purchase Order number) to the customer's purchase order. Both Purchase Order numbers appear on the front page of this Report.
9. Where the customer has provided a specification, the results on the front of this test report conform to that specification unless otherwise noted on this test report.



# TEST REPORT

# MITTAL

REG., JOB, CONTRACT NO.		PURCHASE ORDER NO. 32139	
V E N D O R MITTAL STEEL USA INDIANA HARBOR BAR PRODUCTS 3300 DICKEY ROAD EAST CHICAGO, INDIANA 46312		SHIPPER'S NO.	BILL ORDER NO. 211127
		REPORT PRINT DATE 09/24/2005	

TEST REPORT TO: UNYTITE	SHIP TO: UNYTITE, INC
1 UNYTITE DR	ONE UNYTITE DRIVE
PERU IL 61354	PERU IL, 61354

CMS (REG TM) SQ HOT ROLLED ROUNDS SAE 1045 MOD /RMS-009 (03/09/01) 5 / FINE GRAIN/CWQ/RESTRICTED CHEMICAL REQ/RESTRICTED MAX INCIDENTAL ELEMENTS/MRR FOR SPEC SURF & CLEAN/SPECIAL STRAIGHTENED/EDDY CURRENT TESTED/

RND 1.1250 IN X 24 FT 10 1/2 IN

HEAT: 599494 C : 0.46 Mn: 0.62 P : .008 S : .021 Si: 0.22  
 Cu: .13 Ni: 0.06 Cr: 0.15 Mo: .03 Al: .025  
 Cb: .001 V : .004 N : .009 Ti: .002

Ni+Cr = 0.21

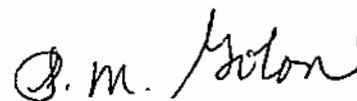
MICROCLEANLINESS per	A (SULF)	B (ALUM)	C (SILI)	D (OXID)
ASTM E45 METHOD A	2.0T 0.0H	0.0T 0.0H	0.0T 0.0H	1.0T 0.0H

DECARBURIZATION: A.A.D. 0.006"

PART NUMBER: CSRB1045M1125

MATERIAL MEETS AUSTENITIC GRAIN SIZE REQUIREMENT OF 5 OR FINER  
 MATERIAL IS 100% SMELT/MELT AND MANUFACTURED IN THE U.S.A.

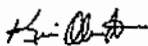
PAMELA M GOLON  
 NOTARY PUBLIC STATE OF INDIANA  
 LAKE COUNTY  
 MY COMMISSION EXP. MAR. 25, 2010



NOTARY

Unless otherwise stated, the steel described herein was manufactured, inspected and tested in accordance with the requirements of the contract or purchase order and conform to those requirements. The steel is free of surface mercury contamination at the time of shipment based on present methods and detection equipment. No mercury, radium or alpha source materials were used in the production of this steel. This steel has not been welded nor repair welded. Heat analyses and test results marked with an asterisk (\*) were reported by a Mittal Steel USA, Indiana Harbor Bar Products approved third party. The "+" sign at the beginning of any line indicates an amendment to that line from a previously issued report for the same heat/order. All tests were performed by Mittal Steel USA, Indiana Harbor Bar Products. In accordance with the following, unless otherwise specified: Chemistry per ASTM E415 & E1019; Hardenability per ASTM A255 and SAE J406; Macrostructure per ASTM E381 & E1180; Mechanical Properties per ASTM A370, E8 & E23; Hardness per ASTM E10 & E18; and SAE J417; Cleanliness per SAE J421; Microstructure/Microcleanliness per ASTM E3, E45, E112 & E1077, J419 & J422, and JIS G0555; NDT per ASNT-TC-1A, Rounding per ASTM E29. Tested per most recent standard, unless otherwise noted. We hereby certify that the heat and/or test results in this report are applicable only to the items described herein, and are correct as contained in the records of the Company. This document shall not be reproduced except in full.

The management system governing the manufacture of this product is ISO/TS 16949:2002 certified, Certificate No. 38325; ISO 14001:1996 certified, Certificate No. 36274 and A2LA accredited in the fields of: Chemical, Mechanical and Environmental Testing - Certificate Nos. 111.01, 111.02 and 111.03

  
 Kevin R. Oberemst  
 Manager - Quality Department



640 Lavoy Road  
 Erie, MI 48133  
 Phone: 734/848-2915 Fax: 734/848-8734

138418

# CERTIFICATE OF ANALYSIS

CUSTOMER ORDER NO: 14186	CERTIFICATION NO: 2 -212824	SHIPPER NO: 2 -212824	CERTIFIED DATE: 06/23/06
CUSTOMER PART NO: P1700H01	AD	SIZE: .1360 x 5.1250 x COIL	
CUSTOMER:  PRESTIGE STAMPING INC. **  P O BOX 1086  WARREN MI 480901086		GRADE: SAE J403 1035 (.32-.38 C ONLY)	
		COILING SPECIFICATION: MELTED AND MANUFACTURED IN THE U.S.A.	

MILL CERT ATTACHED

ATTENTION:

~~All units of measurement for chemistry are in weight percent.~~

COIL NO.	HEAT NUMBER	CHEMISTRY AND MECHANICAL PROPERTIES
HU6903	9402803	C = 0.340 MN= 0.720 P = 0.011 S = 0.002 SI= 0.100 AL= 0.051

## RECEIVED

JUN 29 2006

Time 12:30 Pm *DL*

THE ABOVE MECHANICAL AND CHEMICAL ANALYSES WERE SUPPLIED  
 BY THE PRODUCING MILL OR TESTED ON OUR OWN EQUIPMENT.  
 Form No: FQC 001 Rev.2

*AWD*  
 Agent for Heidman Steel Products, Inc.

HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Invoice No. K09860

Cert No Inv Line No Item No

31083 . 210000 PTU075300

Invoice Date 01/25/07

Quantity 30

Lot No

JH961A

Customer PO 17642

Sales Order K09860

Heat

452770

Assembly No

Haydon PO

A47284

JH961A

# INSPECTION CERTIFICATE



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

SET LOT NO.

Specification	Size	Quantity
ASTM F1852 Type 1	3/4-10 UNC X 3	13,004 pcs.
ASTM A563 Grade DH		
ASTM F436 Type 1		

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

**BOLT LOT NO.** JH961

Date: Jan. 04, '07

Mechanical Property of Full Size Bolts				Chemical Composition %											
Tensile Strength	Proof Load (lb)	Hardness	Heat Treatment	IDENTIFICATION		C	Si	Mn	P	S	Cu	Ni	Cr	Mo	B
				Quench	Temper										
Min. 40100	Part of Screw	Min. 800	800	30	15	30	15	30	40	50	—	—	—	—	—
Average 48900	Part of Screw	890	1580	32	28	28	28	79	7	9	7	5	6	2	27

**NUT LOT NO.** JK781

Mechanical Property of Full Size Nuts				Chemical Composition %									
Hardness	Proof Load (lb)	Heat Treatment	IDENTIFICATION	C	Si	Mn	P	S	Cu	Ni	Cr	Mo	B
Min. 24-38	HRB 89	Min. 800	800	20	—	—	—	—	—	—	—	—	—
Average 29.0	ALL PASS	1202	M630021	45	21	69	12	27	26	10	20	—	—

**WASHER LOT NO.** WB8949

Mechanical Property of Full Size Washers				Chemical Composition %									
Hardness	Proof Load (lb)	Heat Treatment	IDENTIFICATION	C	Si	Mn	P	S	Cu	Ni	Cr	Mo	B
Min. 38-45	HRB 89	Min. 800	800	—	—	—	—	—	—	—	—	—	—
Average 41.9	ALL PASS	1562	B17013	43	18	76	7	1	—	—	—	—	—

Material used for the bolt, nut and washer were melted & manufactured in the USA. The product was manufactured in the USA to ASTM specifications. The bolt and nut are manufactured by Unytite. We hereby certify that the material described has been manufactured and inspected satisfactory with requirement of the above specification.

Thread Accuracy (Bolt & Nut)	
Bolt	ASME B1.1 Class 2A
Nut	ANSI B1.1 Class 2B

**REMARKS**  
 OFFICIAL SEAL  
 JEAN MARGHERIO  
 NOTARY PUBLIC - STATE OF ILLINOIS  
 MY COMMISSION EXPIRES 10/18/08  
 19-50-10

**Fastener Tension**

Fastener Tension	Spec. (lb)	Mean / 6 sets.	Standard Deviation
Min.	29000	36694	1924

Chief of Quality Assurance Section



LOAD



# CHARTER STEEL

## CHARTER STEEL TEST REPORT Reverse Has Text And Codes

A Division of  
Charter Manufacturing Company, Inc.

1658 Cold Springs Road  
Saukville, Wisconsin 53080  
(262) 268-2400  
1-800-437-8789  
FAX (262) 268-2570

UNYTITE, INC.  
ONE UNYTITE DRIVE  
PERU, IL 61354-  
Attn: ATTEN: JEAN MARGHERIO

Cust. P.O.	29646
Cust Part#	C10B30SCO.732D
Charter Sales Order	177723
Heat #	452770
Ship Lot #	502836
Grade#	10B30 M SK FG RHQ
Process	DD
Finish Size	0.732

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed below and on the reverse side, and that it satisfies those requirements.

### Test Results of Heat Lot# 452770

Lab Code: 7388

Chemistry	C	MN	P	S	SI	NI	CR	MO	CU	SN	V
Wt%	0.32	0.79	0.007	0.009	0.280	0.05	0.06	0.02	0.07	0.005	0.001

AL	N	B	TI	NB
0.023	0.0060	0.0027	0.021	0.001

Jominy (HRC)	JOM01	JOM02	JOM03	JOM04	JOM05	JOM06	JOM07	JOM08	JOM09	JOM10	JOM11	JOM12
	53	52	51	45	29	23	22	22	21	20	0	0
	JOM13	JOM14	JOM15	JOM16	JOM18	JOM20	JOM22	JOM24	JOM26	JOM28	JOM30	JOM32
	0	0	0	0	0	0	0	0	0	0	0	0

JOMINY SAMPLE TYPE ENGLISH = R JOMINY LAB = 0358-01  
CHEM. DEVIATION EXT.-GREEN = N/R  
E45 INCLUSION LAB = 0358-02

Cleanliness	ASTM-E45 Method A			
	A	B	C	D
Thin	1.0	2.0	0.0	1.0
Heavy	0.0	0.0	0.0	0.5

### Test Results of Rolling Lot # 353986

QC DEVIATION EXT.-GREEN = N/R

### Test Results of Processing Lot # 502836

	# of Tests	Min Value	Max Value	Mean Value	
TENSILE (KSI)	3	95.1	97.0	96.3	TENSILE LAB = 0358-02
REDUCTION OF AREA (%)	3	41	48	44	RA LAB = 0358-02
ROCKWELL B (HRBW)	3	91	91	91	RB LAB = 0358-02
WIRE SIZE (Inches)	7	0.731	0.731	0.731	
WIRE OUT OF ROUND (Inches)	7	0.000	0.000	0.000	

QC DEVIATION EXT.-PROCESSED = N/R

Specifications: Meets customer specifications with any applicable Charter Steel exceptions for the following customer documents:  
Customer Document = UNYTITE Revision = 5 Dated = 8-MAY-2003

Additional Comments:

Charter Steel  
Saukville, WI, USA



Tim Leahy  
Manager of Quality Assurance  
12/05/2006

Fax number: ( ) - Rem: Load1,Mail0,Fax0

The following statements are applicable to the material described on the front of this Test Report:

1. Except as noted, the steel supplied for this order was melted, rolled and processed in the United States.
2. Mercury was not used during the manufacture of this product; nor was the steel contaminated with mercury during processing.
3. Unless directed by the customer, there are no welds in any of the coils produced for this order.
4. The laboratory that generated the analytical or test results can be identified by the following key:

Certificate Number	Lab Code	Laboratory		Address
0358-01	7388	CSMD	Charter Steel Melting Division	1658 Cold Springs Road, Saukville, WI 53080
0358-02	8171	CSR/D/ CSPD	Charter Steel Rolling/ Processing Division	1658 Cold Springs Road, Saukville, WI 53080
0358-03	123633	P4	Charter Steel Ohio Processing Division	6255 US Highway 23, Risingsun, OH 43457
0358-04	125544	CSC	Charter Steel Cleveland	4300 E. 49 <sup>th</sup> St., Cuyahoga Heights, OH 44125-1004
*	*	--	Subcontracted test performed by laboratory not in Charter Steel system	

5. When run by a Charter Steel laboratory, the following tests were performed according to the latest revisions of the specifications listed below, as noted in the Charter Steel Laboratory Quality Manual:

Test	Possible Laboratory	Specification
Chemistry Analysis	CSMD	ASTM E415; ASTM E1019
Macroetch	CSMD	ASTM E381
Hardenability (Jominy)	CSMD	ASTM A255; JIS G0561
Grain Size	CSMD	ASTM E112
Tensile Test	CSR/D/CSPD, P4, CSC	ASTM E8; ASTM A370
Rockwell Hardness	CSR/D/CSPD, P4, CSC	ASTM E18; ASTM A370
Microstructure (spheroidization)	CSR/D/CSPD, P4	ASTM A892
Cleanliness	CSR/D/CSPD, CSC	ASTM E45

Charter Steel has been accredited to perform all of the above tests by the American Association for Laboratory Accreditation (A2LA). These accreditations expire 01/31/07.

All other test results associated with a Charter Steel laboratory that appear on the front of this report, if any, were performed according to documented procedures developed by Charter Steel and are not accredited by A2LA.

6. The test results on the front of this report are the true values measured on the samples taken from the production lot. They do not apply to any other sample.
7. This test report cannot be reproduced or distributed except in full without the written permission of Charter Steel. The primary customer whose name and address appear on the front of this form may reproduce this test report, subject to the following restrictions:
  - It may be distributed only to their customers
  - Both sides of all pages must be reproduced in full
8. This certification is given subject to the terms and conditions of sale provided in Charter Steel's acknowledgment (designated by our Purchase Order number) to the customer's purchase order. Both Purchase Order numbers appear on the front page of this Report.
9. Where the customer has provided a specification, the results on the front of this test report conform to that specification unless otherwise noted on this test report.



**GERDAU AMERISTEEL**

ST PAUL STEEL MILL  
1678 RED ROCK ROAD  
ST PAUL MN 55119 USA  
(651) 731-5600

Chemical and Physical Test Report  
MADE IN UNITED STATES

M-035488

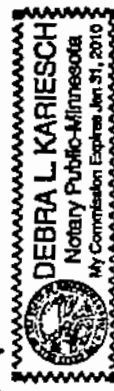
PRODUCED IN: ST PAUL

SHIP TO UNYTIME INC 1 UNYTIME DRIVE PERU, IL 61354		INVOICE TO UNYTIME INC 1 UNYTIME DRIVE PERU, IL 61354		SHIP DATE 12/21/06 CUST. ACCOUNT NO 70000042		SALES ORDER 6083415-01 CUST P.O. NUMBER P001070-01											
SHAPE * SIZE	GRADE	SPECIFICATION															
R158Q	C1045M23F	C1045M23F_A576-908(2000), A28/A29M-05															
HEAT I.D.	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Nb	N	Sn	AJ	Ti	Ca	Co
M630021	.45	.69	.012	.027	.21	.26	.10	.20	.030	.032	.003	.0103	.001	.004	.00350	.00200	.010

Mechanical Test: Rod R 38.97  
Grain Test: FINE Grain Size Units 5.0  
Customer Requirements: SOURCE: MINNESOTA BILLETS CASTING; STRAND CAST  
CUST ITEM NUMBER: B1045SC1.00

Quality Program Manual Rev. 1, Dtd 6/10/05

*Debra Kariesch*



This material, including the billets, was produced and manufactured in the United States of America

*Shaskov*  
Bhaskar Yalamanchilli  
Quality Director  
Gerdau Ameristeel

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

Mgr. Møskilling, Svcs.  
ST PAUL STEEL MILL

Seller warrants that all material furnished shall comply with specifications subject to standard published manufacturing variations. NO OTHER WARRANTIES, EXPRESSED OR IMPLIED, ARE MADE BY THE SELLER, AND SPECIFICALLY EXCLUDED ARE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. In no event shall seller be liable for indirect, consequential or punitive damages arising out of or related to the materials furnished by seller. Any claim for damages for materials that do not conform to specifications must be made from buyer to seller immediately after delivery of same in order to allow the seller the opportunity to inspect the material in question.



### Lead and Mercury Content of Steel

Lead and mercury are not purposefully introduced in the Gerda Ameristeel steel manufacturing process, and are not present at levels that would require disclosure on Material Safety Data Sheets. To the best of our knowledge, no mercury is present in our steel products.

Sincerely,

Gerda Ameristeel

A handwritten signature in black ink, appearing to read 'A. James Turner'.

A. James Turner  
Director, Environment & Quality



**GERDAU AMERISTEEL™**

**Weld Repair of Finished Product**

We hereby certify that weld repair of finished products is not performed at Gerda Ameristeel.

Sincerely,

Gerda Ameristeel

A. James Turner  
Director, Environment & Quality



640 Lavoy Road  
Erie, MI 48133  
Phone: 734/848-2915 Fax: 734/848-8734

B 8949  
**CERTIFICATE  
OF  
ANALYSIS**

CUSTOMER ORDER NO: 14630	CERTIFICATION NO: 3 -219658	SHIPPER NO: 3 -219658	CERTIFIED DATE: 12/12/06
CUSTOMER PART NO: P1480H01	DH	SIZE: .1220 <sub>x</sub> 5.5000 <sub>x</sub>	COIL
CUSTOMER: PRESTIGE STAMPING INC. ** P O BOX 1086 WARREN MI 480901086		GRADE: SAE J403 1040	
COVERING SPECIFICATION: MELTED AND MANUFACTURED IN THE U.S.A.			

ATTENTION:

~~All units of measurement for chemistry are in weight percent.~~

COIL NO.	HEAT NUMBER	CHEMISTRY AND MECHANICAL PROPERTIES
KR0306	B17013	C = 0.430 MN= 0.760 P = 0.007 S = 0.001 SI= 0.180. AL= 0.023
KR0307	B17013	C = 0.430 MN= 0.760 P = 0.007 S = 0.001 SI= 0.180 AL= 0.023

DEC 13 2006

Time 8:00 AM PM.

THE ABOVE MECHANICAL AND CHEMICAL ANALYSES WERE SUPPLIED BY THE PRODUCING MILL OR TESTED ON OUR OWN EQUIPMENT.  
Form No. FOC 001 Rev. 2

Agent for Heidman Steel Products, Inc.

HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17642

Invoice No. K09860

Invoice Date 01/25/07

Sales Order K09860

Cert No Inv Line No Item No

Quantity Lot No

Heat

Assembly No

Haydon PO

30988 . 220000 PTU075275

45 JH921A

450150

A47284

JH921A

# INSPECTION CERTIFICATE


SET LOT NO.

Specification	Size	Quantity
ASTM F1852 Type 1	3/4-10 UNC X 2-3/4	33,785 pcs.
ASTM A563 Grade DH		
ASTM F436 Type 1		

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

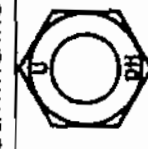
BOLT LOT NO. JH921

Date: Dec. 12, '06

Mechanical Property of Full Size Bolts				Chemical Composition %									
Tensile Strength	Proof Load (Lbf.)	Hardness		C	Si	Mn	P	S	Cu	Ni	Cr	Mo	B
		Position of fracture	HRC										
Min. 40100	Part of Screw	Max. +/- 0.0005 In.	34 MAX	30	15	Min.	Max.	Max.					
Average 51050	Part of Screw	ALL PASS	32.1	52	30	60	40	50					
Heat Treatment				IDENTIFICATION									
Quench													
Temper													
Min. 800				Heat No. 450150									
1580				869									

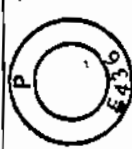
BD471

NUT LOT NO.

Mechanical Property of Full Size Nuts				Chemical Composition %									
Hardness After 24 hr x 1000° F HRB	Min. HRB 89	Proof Load (Lbf)	Heat Treatment		C	Si	Mn	P	S	Cu	Ni	Cr	
			Quench	Temper									x 100
24 - 38	Min.	58450	Min.		20		Min.	Max.	Max.				
29.6	HRB 89	ALL PASS	800	1211	55		60	40	50				
Heat Treatment				IDENTIFICATION									
1562													
S77130													
Heat No. 9402246				Heat No. 450150									

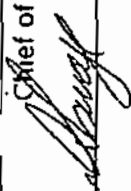
WB8123

WASHER LOT NO.

Mechanical Property of Full Size Washers				Chemical Composition %									
Hardness (HRC)	Min. HRB 89	Proof Load (Lbf)	Heat Treatment		C	Si	Mn	P	S	Cu	Ni	Cr	
			Quench	Temper									x 100
38 - 45	Min.	58450	Min.		20		Min.	Max.	Max.				
42.0	HRB 89	ALL PASS	800	1211	55		60	40	50				
Heat Treatment				IDENTIFICATION									
9402246													
Heat No. 9402246													
Heat No. 450150				Heat No. 450150									

Material used for the bolt, nut and washer were melted & manufactured in the USA. The product was manufactured in the USA to ASTM specifications. The bolt and nut are manufactured by Unytite. We hereby certify that the material described has been manufactured and inspected satisfactory with requirement of the above specification.

Chief of Quality Assurance Section



Thread Accuracy (Bolt & Nut)	REMARKS
Bolt ASME B1.1 Class 2A Nut ANSI B1.1 Class 2B	<p>OFFICIAL SEAL</p> <p>JEAN MARGHERIO</p> <p>NOTARY PUBLIC - STATE OF ILLINOIS</p> <p>MY COMMISSION EXPIRES: 10/18/09</p> <p>12-13-06</p>

UNYTITE, INC.

One Unytite Drive  
Peru, Illinois 61354

815-224-2221 — FAX # 815-224-3434





LOAD



# CHARTER STEEL

## CHARTER STEEL TEST REPORT Reverse Has Text And Codes

A Division of  
Charter Manufacturing Company, Inc.

1658 Cold Springs Road  
Saukville, Wisconsin 53080  
{262} 268-2400  
1-800-437-8789  
FAX {262} 268-2570

UNYTITE, INC.  
ONE UNYTITE DRIVE  
PERU, IL 61354-  
Attn: ATTEN: JEAN MARGHERIO

Cust. P.O.	29646
Cust Part#	C10B30SC0.732D
Charter Sales Order	177723
Heat #	450150
Ship Lot #	502728
Grade#	10B30 M SK FG RHQ
Process	DD
Finish Size	0.732

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed below and on the reverse side, and that it satisfies those requirements.

### Test Results of Heat Lot# 450150

Lab Code: 7388

Chemistry	C	MN	P	S	SI	NI	CR	MO	CU	SN	V
Wt%	0.31	0.82	0.007	0.007	0.250	0.04	0.05	0.01	0.09	0.006	0.001
	AL	N	B	TI	NB						
	0.023	0.0060	0.0027	0.018	0.001						

Jominy (HRC)	JOM01	JOM02	JOM03	JOM04	JOM05	JOM06	JOM07	JOM08	JOM09	JOM10	JOM11	JOM12
	53	51	51	48	32	23	22	21	21	20	20	0
	JOM13	JOM14	JOM15	JOM16	JOM18	JOM20	JOM22	JOM24	JOM26	JOM28	JOM30	JOM32
	0	0	0	0	0	0	0	0	0	0	0	0

JOMINY SAMPLE TYPE ENGLISH = R JOMINY LAB = 0358-01  
CHEM. DEVIATION EXT.-GREEN = N/R  
E45 INCLUSION LAB = 0358-02

Cleanliness	ASTM-E45 Method A			
	A	B	C	D
Thin	1.0	1.0	0.0	0.5
Heavy	0.0	0.0	0.0	0.0

### Test Results of Rolling Lot # 353989

QC DEVIATION EXT.-GREEN = N/R

	# of Tests	Min Value	Max Value	Mean Value	
TENSILE (KSI)	3	94.7	96.5	95.7	TENSILE LAB = 0358-02
REDUCTION OF AREA (%)	3	51	53	52	RA LAB = 0358-02
ROCKWELL B (HRBW)	3	90	92	91	RB LAB = 0358-02
WIRE SIZE (Inches)	13	0.731	0.732	0.731	
WIRE OUT OF ROUND (Inches)	13	0.000	0.000	0.000	
QC DEVIATION EXT.-PROCESSED = N/R					

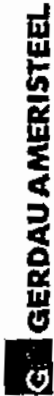
Specifications: Meets customer specifications with any applicable Charter Steel exceptions for the following customer documents:  
Customer Document = UNYTITE Revision = 5 Dated = 8-MAY-2003

Additional Comments:

Charter Steel  
Saukville, WI, USA



Tim Leahy  
Manager of Quality Assurance  
12/04/2006



ST PAUL STEEL MILL  
1678 RED ROCK ROAD  
ST PAUL MN 55119 USA  
(651) 731-5800

Chemical and Physical Test Report  
MADE IN UNITED STATES

M-034027

PRODUCED IN: ST PAUL

SHIP TO UNYTITE INC 1 UNYTITE DRIVE PERU, IL 61354	INVOICE TO UNYTITE INC 1 UNYTITE DRIVE PERU, IL 61354	SHIP DATE 11/18/06	CUST. ACCOUNT NO 70000042
---	--	-----------------------	------------------------------

SHAPE + SIZE R15BQ	GRADE C1045M23F	SPECIFICATION A578-90B(2009)A28/A29M-05	SALES ORDER 6072000-03	CUST P.O. NUMBER P001012-03													
HEAT I.D. S77130	C .44	Mn .88	P .010	S .20	Si .20	Cu .23	Ni .13	Cr .13	Mo .020	V .027	Nb .001	N .0053	Sn .022	Al .002	Ti .00260	Ca .00220	Co .009

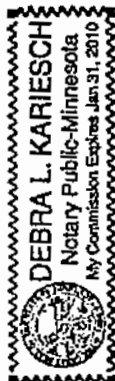
Mechanical Test: Red R 36.5 Std Dev=0 (d) Diam: 1.319  
Cleanliness Test

FG(5-8), ROLL LOT M627508, QUALITY PROGRAM MANUAL REV. 1 DTD 8/10/05  
Fine  
Grain Size Units S.D

J1	J2	J3	J4	J5	J6	J7	J8	J9	J10	J11	J12	J13	J14	J15	J16	J17	J18	J19	J20	J21	J22	J23	J24	J25	J26	J27	J28	J29	J30	J31	J32
58	54	46	34	25.2	25	24	23	22	21	19	18	17	16	15	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14

Customer Requirements SOURCE: MINNESOTA BILLETS CASTING: STRAND CAST  
CUST ITEM NUMBER: B1045SC1.0000

*Debra Kariesch*



This material, including the billets, was produced and manufactured in the United States of America

*Shankar*  
Bhaskar Yalamanchili  
Quality Director  
Gerdau Ameristeel

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

Mgr. Metallurg. Svcs.  
ST PAUL STEEL MILL

Seller warrants that all material furnished shall comply with specifications subject to standard published manufacturing variations. NO OTHER WARRANTIES, EXPRESSED OR IMPLIED, ARE MADE BY THE SELLER. AND SPECIFICALLY EXCLUDED ARE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. In no event shall seller be liable for indirect, consequential or punitive damages arising out of or related to the materials furnished by seller. Any claim for damages for materials that do not conform to specifications must be made from buyer to seller immediately after delivery of same in order to allow the seller the opportunity to inspect the material in question.



**GERDAU AMERISTEEL™**

**Lead and Mercury Content of Steel**

Lead and mercury are not purposefully introduced in the Gerdau Ameristeel steel manufacturing process, and are not present at levels that would require disclosure on Material Safety Data Sheets. To the best of our knowledge, no mercury is present in our steel products.

Sincerely,

Gerdau Ameristeel

A. James Turner  
Director, Environment & Quality



**GERDAU AMERISTEEL**

**Weld Repair of Finished Product**

We hereby certify that weld repair of finished products is not performed at Gerda Ameristeel.

Sincerely,

Gerda Ameristeel

A. James Turner  
Director, Environment & Quality



640 Lavoy Road  
 Erie, MI 48133  
 Phone: 734/848-2915 Fax: 734/848-8734

**CERTIFICATE  
 OF  
 ANALYSIS**

W  
 B 8123

CUSTOMER ORDER NO: 14080	CERTIFICATION NO: 3 -214327	SHIPPER NO: 3 -214327	CERTIFIED DATE: 04/06/06
CUSTOMER PART NO: P1580H00	RF	SIZE: .1220 <sub>x</sub> 5.7000 <sub>x</sub> COIL	
CUSTOMER:  PRESTIGE STAMPING INC. **  P O BOX 1086  WARREN MI 480901016		GRADE: SAE J403 1035	
		COATING SPECIFICATION: MELTED AND MANUFACTURED IN THE U.S.A.	

ATTENTION:

~~All units of measurement for chemistry are in weight percent.~~

COIL NO.	HEAT NUMBER	CHEMISTRY AND MECHANICAL PROPERTIES
GK2302	9402246	C = 0.350 MN= 0.660 P = 0.007 S = 0.004 SI= 0.070 A <sub>1</sub> = 0.045

**RECEIVED**

APR 10 2006

*C.D.*

THE ABOVE MECHANICAL AND CHEMICAL ANALYSES WERE SUPPLIED  
 BY THE PRODUCING MILL OR TESTED ON OUR OWN EQUIPMENT.  
 Form No. FQC 001 Rev. 2

Agent for Heidman Steel Products, Inc.

# HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17642

Invoice No. K09860

Invoice Date 01/25/07

Sales Order K09860

Cert No Inv Line No Item No

Quantity Lot No

Heat

Assembly No

31109 . 230000 PTU075250

480 JH871A

452770

Haydon PO  
A47284

JH871A

# INSPECTION CERTIFICATE

SET LOT NO.

Specification	Size	Quantity
ASTM F1852 Type 1	3/4-10 UNC X 2-1/2	33,775 pcs.
ASTM A563 Grade DH		
ASTM F436 Type 1		



**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

Date: Dec. 27, '06

**BOLT LOT NO.** JH871

Spec.	Mechanical Property of Full Size Bolts			Heat Treatment		Chemical Composition %									
	Tensile Strength Load (lbf)	Position of fracture	Hardness lb./in. (Length Method)	°F (°C)		C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100	Mo x 100	B x 10,000
				Quench	Temper										
40100	Min.	Part of Screw	Max. +/- 0.0005 in.	...	Min. 800	30	15	52	30	Max. 40	Max. 50	...	...	...	...
51125	Part of Screw	ALL PASS	31.9	1580	869	32	28	79	7	9	7	5	6	2	27

**NUT LOT NO.** JJ581

Hardness (HRC)	Hardness After 24 hr x 1000° F HRB	Proof Load (Lbf)	Heat Treatment		Chemical Composition %										
			°F (°C)		C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100			
			Quench	Temper											
24-38	Min.	58450	...	Min. 800	20	...	60	40	50	...	...	...	...	...	...
28.7	—	ALL PASS	1562	1289	45	24	80	7	28	18	8	12	...	...	...

**WASHER LOT NO.** WB8949

Hardness (HRC)	Mechanical Property of Full Size Washers			Heat Treatment		Chemical Composition %									
	Tensile Strength Load (lbf)	Position of fracture	Hardness lb./in. (Length Method)	°F (°C)		C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100		
				Quench	Temper										
38-45	Min.	Part of Washer	Max. +/- 0.0005 in.	...	Min. 800	...	...	...	...	...	...	...	...		
41.9	Part of Washer	ALL PASS	76	7	1	43	18	76	7	1	...	...	...		

Material used for the bolt, nut and washer were melted & manufactured in the USA. The product was manufactured in the USA to ASTM specifications. The bolt and nut are manufactured by Unytite. We hereby certify that the material described has been manufactured and inspected satisfactory with requirement of the above specification.

Chief of Quality Assurance Section.

*[Signature]*

Thread Accuracy (Bolt & Nut)	Remarks
Bolt ASME B1.1 Class 2A Nut ANSI B1.1 Class 2B	OFFICIAL SEAL JEAN MARGHERIO NOTARY PUBLIC - STATE OF ILLINOIS MY COMMISSION EXPIRES: 10/18/09

B 8949



640 Lavoy Road  
Erie, MI 48133  
Phone: 734/848-2915 Fax: 734/848-8734

# CERTIFICATE OF ANALYSIS

CUSTOMER ORDER NO: 14630	CERTIFICATION NO: 3 -219658	SHIPPER NO: 3 -219658	CERTIFIED DATE: 12/12/06
CUSTOMER PART NO: P1480H01	DH	SIZE: .1220 <sub>x</sub> 5.5000 <sub>x</sub>	COIL
CUSTOMER:  PRESTIGE STAMPING INC. **  P O BOX 1086  WARREN MI 480901086		GRADE: SAE J403 1040	
MELTED AND MANUFACTURED IN THE U.S.A.			

ATTENTION:

~~All units of measurement for chemistry are in weight percent.~~

COIL NO.	HEAT NUMBER	CHEMISTRY AND MECHANICAL PROPERTIES
KR0306	B17013	C = 0.430 MN= 0.760 P = 0.007 S = 0.001 SI= 0.180. AL= 0.023
KR0307	B17013	C = 0.430 MN= 0.760 P = 0.007 S = 0.001 SI= 0.180 AL= 0.023

DEC 13 2006

Time 8:00 AM DN.

THE ABOVE MECHANICAL AND CHEMICAL ANALYSES WERE SUPPLIED BY THE PRODUCING MILL OR TESTED ON OUR OWN EQUIPMENT.  
Form No. FQC (X) Rev. 2

Agent for Holdtman Steel Products, Inc.



LOAD


 CHARTER  
STEEL

# CHARTER STEEL

**CHARTER STEEL TEST REPORT**  
 Reverse Has Text And Codes

 A Division of  
 Charter Manufacturing Company, Inc.

 1658 Cold Springs Road  
 Saukville, Wisconsin 53080  
 (262) 268-2400  
 1-800-437-8789  
 FAX (262) 268-2570

 UNYTITE, INC.  
 ONE UNYTITE DRIVE  
 PERU, IL 61354-  
 Attn: ATTN: JEAN MARGHERIO

Cust. P.O.	29646
Cust Part#	C10B30SC0.732D
Charter Sales Order	177723
Heat #	452770
Ship Lot #	502836
Grade#	10B30 M SK FG RHQ
Process	DD
Finish Size	0.732

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed below and on the reverse side, and that it satisfies those requirements.

## Test Results of Heat Lot# 452770

Lab Code: 7388

Chemistry	C	MN	P	S	SI	NI	CR	MO	CU	SN	V
Wt%	0.32	0.79	0.007	0.009	0.280	0.05	0.06	0.02	0.07	0.005	0.001
	AL	N	B	Ti	NB						
	0.023	0.0060	0.0027	0.021	0.001						

Jominy (HRC)	JOM01	JOM02	JOM03	JOM04	JOM05	JOM06	JOM07	JOM08	JOM09	JOM10	JOM11	JOM12
	53	52	51	45	29	23	22	22	21	20	0	0
Jominy (HRC)	JOM13	JOM14	JOM15	JOM16	JOM18	JOM20	JOM22	JOM24	JOM26	JOM28	JOM30	JOM32
	0	0	0	0	0	0	0	0	0	0	0	0

 JOMINY SAMPLE TYPE ENGLISH = R JOMINY LAB = 0358-01  
 CHEM. DEVIATION EXT.-GREEN = N/R  
 E45 INCLUSION LAB = 0358-02

Cleanliness

ASTM-E45 Method A

	A	B	C	D
Thin	1.0	2.0	0.0	1.0
Heavy	0.0	0.0	0.0	0.5

## Test Results of Rolling Lot # 353986

QC DEVIATION EXT.-GREEN = N/R

## Test Results of Processing Lot # 502836


	# of Tests	Min Value	Max Value	Mean Value	
TENSILE (KSI)	3	95.1	97.0	96.3	TENSILE LAB = 0358-02
REDUCTION OF AREA (%)	3	41	48	44	RA LAB = 0358-02
ROCKWELL B (HRBW)	3	91	91	91	RB LAB = 0358-02
WIRE SIZE (Inches)	7	0.731	0.731	0.731	
WIRE OUT OF ROUND (Inches)	7	0.000	0.000	0.000	
QC DEVIATION EXT.-PROCESSED = N/R					

Specifications:

 Meets customer specifications with any applicable Charter Steel exceptions for the following customer documents:  
 Customer Document = UNYTITE Revision = 5 Dated = 8-MAY-2003

Additional Comments:

 Charter Steel  
 Saukville, WI, USA

  
 Tim Leahy  
 Manager of Quality Assurance  
 12/05/2006

Fax number: ( ) - Rem: Load1,Mail0,Fax0

The following statements are applicable to the material described on the front of this Test Report:

1. Except as noted, the steel supplied for this order was melted, rolled and processed in the United States.
2. Mercury was not used during the manufacture of this product; nor was the steel contaminated with mercury during processing.
3. Unless directed by the customer, there are no welds in any of the coils produced for this order.
4. The laboratory that generated the analytical or test results can be identified by the following key:

Certificate Number	Lab Code	Laboratory		Address
0358-01	7388	<b>CSMD</b>	Charter Steel Melting Division	1658 Cold Springs Road, Saukville, WI 53080
0358-02	8171	<b>CSR/ CSPD</b>	Charter Steel Rolling/ Processing Division	1658 Cold Springs Road, Saukville, WI 53080
0358-03	123633	<b>P4</b>	Charter Steel Ohio Processing Division	6255 US Highway 23, Risingsun, OH 43457
0358-04	125544	<b>CSC</b>	Charter Steel Cleveland	4300 E. 49 <sup>th</sup> St., Cuyahoga Heights, OH 44125-1004
		-	Subcontracted test performed by laboratory not in Charter Steel system	

5. When run by a Charter Steel laboratory, the following tests were performed according to the latest revisions of the specifications listed below, as noted in the Charter Steel Laboratory Quality Manual:

Test	Possible Laboratory	Specification
Chemistry Analysis	CSMD	ASTM E415; ASTM E1019
Macroetch	CSMD	ASTM E381
Hardenability (Jominy)	CSMD	ASTM A255; JIS G0561
Grain Size	CSMD	ASTM E112
Tensile Test	CSR/ CSPD, P4, CSC	ASTM E8; ASTM A370
Rockwell Hardness	CSR/ CSPD, P4, CSC	ASTM E18; ASTM A370
Microstructure (spheroidization)	CSR/ CSPD, P4	ASTM A892
Cleanliness	CSR/ CSPD, CSC	ASTM E45

Charter Steel has been accredited to perform all of the above tests by the American Association for Laboratory Accreditation (A2LA). These accreditations expire 01/31/07.

All other test results associated with a Charter Steel laboratory that appear on the front of this report, if any, were performed according to documented procedures developed by Charter Steel and are not accredited by A2LA.

6. The test results on the front of this report are the true values measured on the samples taken from the production lot. They do not apply to any other sample.
7. This test report cannot be reproduced or distributed except in full without the written permission of Charter Steel. The primary customer whose name and address appear on the front of this form may reproduce this test report, subject to the following restrictions:
  - It may be distributed only to their customers
  - Both sides of all pages must be reproduced in full
8. This certification is given subject to the terms and conditions of sale provided in Charter Steel's acknowledgment (designated by our Purchase Order number) to the customer's purchase order. Both Purchase Order numbers appear on the front page of this Report.
9. Where the customer has provided a specification, the results on the front of this test report conform to that specification unless otherwise noted on this test report.



**CERTIFIED MATERIAL TEST REPORT**

<b>CUSTOMER ORDER NUMBER</b> P001168	<b>CUSTOMER PART NUMBER</b> B1045SC10000	<b>HEAT NUMBER</b> M22536	<b>WORK ORDER NUMBER</b> 203498 101	<b>DATE</b> 12/01/06
---	---	------------------------------	--	-------------------------

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

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

**ORDERED**

<b>GRADE</b> 1045	<b>SIZE</b> 1" RND	<b>LENGTH</b> 24' 10 1/2"
----------------------	-----------------------	------------------------------

**CUSTOMER SPECIFICATIONS**  
SAE 1045; ASTM E381-91

**CHEMICAL ANALYSIS - (BAR AVERAGE)**

C	Mn	P	S	Si	Ni	Cr	Mo	Cu	Sn	Al
0.45	0.80	0.007	0.028	0.24	0.08	0.12	0.04	0.18	0.008	0.003
V	Nb									
0.055	0.002									

**GRAIN SIZE** SPECIFICATION ASTM E112 FINE GRAIN 5-8

**MACROCLEANLINESS** SPECIFICATION ASTM E381

**PLATE I**

**PLATE II**

<b>AVERAGE</b>	<b>S</b>	<b>R</b>	<b>C</b>	<b>NONE</b>
1	1	1		

**DECARB** SPECIFICATION ASTM E1077

**F** TOTAL= 0.004

PAGE 1

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

MACSTEEL  
3000 East Front Street  
Monroe, MI 48161

MACSTEEL-JACKSON   
MACSTEEL-FT SMITH   
MACSTEEL-MONROE

  
Quality Assurance Representative

# HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17642

Invoice No. K09860

Invoice Date 01/25/07

Sales Order K09860

Cert No Inv Line No Item No

Quantity Lot No

Heat

Assembly No Haydon PO

31105 . 240000 PTU075225

825 JK401A

452780

A47284

JK401A

# INSPECTION CERTIFICATE

**UNYRITE, INC.**

One Unyrite Drive  
Peru, Illinois 61354

815-224-2221 — FAX # 815-224-3434



SEY LOT NO. \_\_\_\_\_

Specification	Size	Quantity
ASTM F1852 Type 1	3/4 - 10 UNC X 2 - 1/4	34,045 pcs.
ASTM A563 Grade DH		
ASTM F436 Type 1		

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

**BOLT LOT NO.** JK401

Date: Dec. 19, '06

Mechanical Property of Full Size Bolts	Chemical Composition %												
	Tensile Strength	Proof Load	Hardness	IDENTIFICATION							Mo	B	
Load (lbf)	Position of Fracture	(lbf)	HRC	C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100	Mo x 100	B x 10,000
Min.	Max.	Min.	Max.										
40100	Part of Screw	± 0.0005 In.	34 MAX	30	15	60	40	50	—	—	—	—	—
51025	Part of Screw	ALL PASS	30.9	32	27	78	8	8	8	5	7	2	23

**NUT LOT NO.** BC781

Hardness (HRC)	Hardness After 24 hr x 1000° F HRB	Proof Load (Lbf)	Heat Treatment	IDENTIFICATION	Chemical Composition %									
					Quench	Temper	Min.	C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100
24 - 38	HRB 89	58450	—	800	—	—	60	40	50	—	—	—	—	
28.9	—	ALL PASS	1562	1202	46	22	70	8	28	20	10	14	—	

**WASHER LOT NO.** WB8754

Hardness (HRC)	IDENTIFICATION	Chemical Composition %										
		C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100			
38 - 45	Heat No.	—	—	—	—	—	—	—	—	—	—	—
42.5	9403080	37	7	72	8	4	—	—	—	—	—	—

Material used for the bolt, nut and washer were melted & manufactured in the USA. The product was manufactured in the USA to ASTM specifications. The bolt and nut are manufactured by Unyrite. We hereby certify that the material described has been manufactured and inspected satisfactory with requirement of the above specification.

Thread Accuracy (Bolt & Nut)
Bolt ASME B1.1 Class 2A
Nut ANSI B1.1 Class 2B

**REMARKS**

OFFICIAL SEAL  
JEAN MARGHERIO  
NOTARY PUBLIC - STATE OF ILLINOIS  
MY COMMISSION EXPIRES: 10/16/09

**Fastener Tension**

Fastener Tension	
Spec. (lbf)	29000
Mean / 6 sets.	36808
Standard Deviation	2201

Chief of Quality Assurance Section

M627512

P.O Box 64189  
1678 Red Rock Road  
Saint Paul, Minnesota 55164

Heat #:	S7726
Size:	1"
Product:	Round Bar
Grade:	C1045M23FC
Date Rolled:	08-06-2006
P.O	P001009
M.O #:	607174001

# CERTIFIED TEST REPORT

## CHEMICAL ANALYSIS (WT %)

C	Mn	P	S	Si	Sn	Cu	Ni	Cr	Mo	Cb	V	Co	Al	Ti	Ca ppm	N ppm
0.46	.70	0.008	0.028	0.22	0.019	0.2	0.1	0.14	0.03	0.001	0.028	0.009	0.002	0.0028	19	87

MATERIAL 100% MELTED AND ROLLED IN THE USA. MANUFACTURING PROCESSES FOR THIS STEEL, WHICH MAY INCLUDE SCRAP MELTED IN AN ELECTRIC ARC FURNACE AND HOT ROLLING, HAVE BEEN PERFORMED AT GERDAU AMERISTEEL MINNESOTA, 1678 RED ROCK ROAD, SAINT PAUL MINNESOTA, USA. ALL PRODUCT PRODUCED FROM STRAND CAST BILLETS. NO WELD REPAIRMENT PERFORMED. STEEL NOT EXPOSED TO MERCURY OR ANY LIQUID ALLOY WHICH IS LIQUID AT AMBIENT TEMPERATURES DURING PROCESSING OR WHILE IN GERDAU AMERISTEEL MINNESOTA POSSESSION.

## 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

## MECHANICAL TEST REPORT

SPECIMEN AREA (in <sup>2</sup> )	YIELD (Kips)	YIELD (Ksi)	TENSILE (Kips)	TENSILE (Ksi)	GAUGE LENGTH (in)	% ELONG	BEND	% R.A.

Additional Specifications/Comments:  
A576-90b (2000)  
A29/A29M-05

Quality Program Manual Rev. I, dtd 6/10/05

Grain Size: <input type="text" value="Fine"/>	Reduction Ratio: <input type="text" value="38.5:1"/>	C.E Per: <input type="text"/>	As Rolled surface Hardness
Coding: <input type="text"/>	D.I: <input type="text" value="1.45"/> in. Ms: <input type="text" value="599.3"/> Deg F.	C.E: <input type="text"/>	HBW/ HRC
			Test 1: <input type="text"/>
			Test 2: <input type="text"/>

CHARPY IMPACT TEST		
*	Test 1	Test 2
Temp (F)		
ft-lb 1		
ft-lb 2		
ft-lb 3		

ASTM E45 is not a laboratory accredited test.

Micro Clean Average									
At: <input type="text"/>	Ah: <input type="text"/>	Bt: <input type="text"/>	Bh: <input type="text"/>	Ct: <input type="text"/>	Ch: <input type="text"/>	Dt: <input type="text"/>	Dh: <input type="text"/>	S-Rating: <input type="text"/>	O-Rating: <input type="text"/>
Macro Etch: <input type="text"/>									

Accredited to:	ASTM Test Method									
	ASTM A370	ASTM E8	ASTM E10	ASTM E18	ASTM E23	ASTM E112	ASTM E255	ASTM E290	ASTM E415	ASTM E1019
ISO 17025	X	X	X	X				X	X	X
subcontractor (ISO 17025)		*			*	*	*			

The above results relate only to the items tested.

Chemical tests performed in accordance with ASTM E415 and E1019. Mechanical tests performed in accordance to ASTM E8, E10, E18, E290 and A370. All other tests performed in accordance with the requirements of applicable specifications unless otherwise noted above. We hereby certify that the above test results are representative of those contained in the records of the company.

Any modification to this certificate as provided by Gerdaul Ameristeel - Minnesota without the expressed written consent of Gerdaul Ameristeel - Minnesota negates the validity of this test report. This report shall not be reproduced except in full, without the expressed written consent of Gerdaul Ameristeel Minnesota. Gerdaul Ameristeel - Minnesota is not responsible for the inability of this material to meet specific applications.

X Gerdaul Ameristeel Minnesota, A2LA Certification #1055-01 Exp. 6/30/06

\* Denotes Testing By Sub-Contractor:  
Metallurgical Services Inc., A2LA Certification #510-01 Exp. 12/31/06  
Stork Twin City Testing, A2LA Certification #1479-01 Exp 12/31/06

Measurement of uncertainty information is available upon request.

SIGNED:	<b>QA Approval</b>
DATE: 10-11-2006	<i>K. Wong</i>
APPROVAL:	<b>Ken Wong</b>

SWORN AND SUBSCRIBED TO BEFORE ME  
THIS 11 DAY Oct 2006  
*Debra L. Kariesch*  
(NOTARY PUBLIC)  
THIS CERTIFICATE IS NOTARIZED ONLY WHEN REQUESTED.  
**DEBRA L. KARIESCH**  
Notary Public-Minnesota  
My Commission Expires Jan 31, 2010



640 Lavooy Road  
 Erie, MI 48133  
 Phone: 734/848-2915 Fax: 734/848-8734

V 0104

# CERTIFICATE OF ANALYSIS

CUSTOMER ORDER NO: 14543	CERTIFICATION NO: 2 -217419	SHIPPER NO: 2 -217419	CERTIFIED DATE: 10/18/06
CUSTOMER PART NO: P1480H01	RF	SIZE: .1220 <sub>x</sub> 5.5000 <sub>x</sub> COIL	
CUSTOMER:  PRESTIGE STAMPING INC. **  P O BOX 1086  WARREN MI 480901086		GRADE: SAB J403 1040	
		COILING SPECIFICATION: MEMENTED AND MANUFACTURED IN THE U.S.A.	

ATTENTION:

~~All units of measurement for chemistry are in weight percent.~~

COIL NO.	HEAT NUMBER	CHEMISTRY AND MECHANICAL PROPERTIES
KE7801	9403080	C = 0.370 MN= 0.720 P = 0.008 S = 0.004 SI= 0.070 AL= 0.047

**RECEIVED**

OCT 19 2006

Time           

THE ABOVE MECHANICAL AND CHEMICAL ANALYSES WERE SUPPLIED  
 BY THE PRODUCING MILL OR TESTED ON OUR OWN EQUIPMENT.  
 Form No. FQC 001 Rev. 2

\_\_\_\_\_  
 Agent for Heidman Steel Products, Inc.


 CHARTER  
STEEL

# CHARTER STEEL

**CHARTER STEEL TEST REPORT**  
 Reverse Has Text And Codes

 A Division of  
 Charter Manufacturing Company, Inc.

 1658 Cold Springs Road  
 Saukville, Wisconsin 53080  
 (262) 268-2400  
 1-800-437-8789  
 FAX (262) 268-2570

**UNYTITE, INC.**  
**ONE UNYTITE DRIVE**  
**PERU, IL 61354-**  
**Attn: ATTN: JEAN MARGHERIO**

Cust. P.O.	29646
Cust Part#	C10B30SC0.732D
Charter Sales Order	177723
Heat #	452780
Ship Lot #	502850
Grade#	10B30 M SK FG RHQ
Process	DD
Finish Size	0.732

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed below and on the reverse side, and that it satisfies those requirements.

**Test Results of Heat Lot# 452780**

Lab Code: 7388

Chemistry	C	MN	P	S	SI	NI	CR	MO	CU	SN	V
Wt%	0.32	0.78	0.008	0.008	0.270	0.05	0.07	0.02	0.08	0.005	0.001
	AL	N	B	TI	NB						
	0.023	0.0060	0.0023	0.020	0.001						

Jominy (HRC)	JOM01	JOM02	JOM03	JOM04	JOM05	JOM06	JOM07	JOM08	JOM09	JOM10	JOM11	JOM12
	54	52	51	49	33	24	22	22	22	21	20	20
	JOM13	JOM14	JOM15	JOM16	JOM18	JOM20	JOM22	JOM24	JOM26	JOM28	JOM30	JOM32
	0	0	0	0	0	0	0	0	0	0	0	0

 JOMINY SAMPLE TYPE ENGLISH = R JOMINY LAB = 0358-01  
 CHEM. DEVIATION EXT.-GREEN = N/R  
 E45 INCLUSION LAB = 0358-02

Cleanliness	ASTM-E45 Method A			
	A	B	C	D
Thin	1.0	1.0	0.0	0.5
Heavy	0.0	0.0	0.0	0.0

**Test Results of Rolling Lot # 353985**

QC DEVIATION EXT.-GREEN = N/R

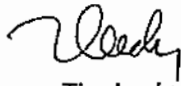
	# of Tests	Test Results of Processing Lot # 502850			
		Min Value	Max Value	Mean Value	
TENSILE (KSI)	3	95.8	97.3	96.3	TENSILE LAB = 0358-02
REDUCTION OF AREA (%)	3	49	53	51	RA LAB = 0358-02
ROCKWELL B (HRBW)	3	90	92	91	RB LAB = 0358-02
WIRE SIZE (Inches)	10	0.732	0.732	0.732	
WIRE OUT OF ROUND (Inches)	10	0.000	0.000	0.000	

 Specifications: Meets customer specifications with any applicable Charter Steel exceptions for the following customer documents:  
 Customer Document = UNYTITE Revision = 5 Dated = 8-MAY-2003

Additional Comments:

 Charter Steel  
 Saukville, WI, USA


Fax number: ( ) - Rem: Load1,Mail0,Fax0

  
 Tim Leahy  
 Manager of Quality Assurance  
 12/05/2006



# HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17642

Invoice No. K09860

Invoice Date 01/25/07

Sales Order K09860

Cert No Inv Line No Item No

Quantity Lot No

Assembly No

Haydon PO

31176 . 250000 PTU075200

835 JM701A

Heat 454700

A47284

# INSPECTION CERTIFICATE

JM701A

SET LOT NO.

Specification	Size	Quantity
ASTM F1852 Type 1	3/4-10 UNC X 2	35,305 pcs.
ASTM A563 Grade DH		
ASTM F436 Type 1		

**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

Date: Jan. 15, '07

BOLT LOT NO. JM701

Mechanical Property of Full Size Bolts				Chemical Composition %												
Tensile Strength	Proof Load 28400 (Length Method)	Hardness	HRC	Heat Treatment		IDENTIFICATION										
				Quench	Temper	C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100	Mo x 100	B x 10,000	
Spec.	40100	Min.	34 MAX	Max.	800											
Average	49150	Part of Screw	32.1	+/ - 0.0005 in.	1580	925	3.1	26	76	7	9	9	6	10	3	23
		Part of Screw		ALL PASS			454700									

NUT LOT NO. JK771

Mechanical Property of Full Size Nuts				Chemical Composition %												
Hardness (HRC)	Hardness After 24 hr x 1000° F HRB	Proof Load (Lbf)	Heat Treatment	IDENTIFICATION		IDENTIFICATION										
				Quench	Temper	C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100			
Spec.	24 - 38	Min.	1202	Min.	800											
Mean/5 pcs.	28.7	HRB 89	1562	800	45	24	80	28	18	8	12					
		ALL PASS														

WASHER LOT NO. WB8947

Mechanical Property of Full Size Washers				Chemical Composition %												
Hardness (HRC)	Hardness (HRB)	Proof Load (Lbf)	Heat Treatment	IDENTIFICATION		IDENTIFICATION										
				Quench	Temper	C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100			
Spec.	38 - 45	Min.	1202	Min.	800											
Mean/5 Pcs.	42.0	HRB 82	1562	800	36	40	82	13	3							
		ALL PASS														

Material used for the bolt, nut and washer were melted & manufactured in the USA. The product was manufactured in the USA to ASTM specifications. The bolt and nut are manufactured by Unytite. We hereby certify that the material described has been manufactured and inspected satisfactory with requirement of the above specification.

Thread Accuracy (Bolt & Nut)	
Bolt	ASME B1.1 Class 2A
Nut	ANSI B1.1 Class 2B

REMARKS: *01-16-07*

*Jean Margherio*  
OFFICIAL SEAL  
JEAN MARGHERIO  
NOTARY PUBLIC - STATE OF ILLINOIS  
MY COMMISSION EXPIRES: 11/18/09

Chief of Quality Assurance Section

*[Signature]*



# CHARTER STEEL

## CHARTER STEEL TEST REPORT Reverse Has Text And Codes

A Division of  
Charter Manufacturing Company, Inc.

1658 Cold Springs Road  
Saukville, Wisconsin 53080  
(262) 268-2400  
1-800-437-8789  
FAX (262) 268-2570

UNYTITE, INC.  
ONE UNYTITE DRIVE  
PERU, IL 61354-  
Attn: ATTEN: JEAN MARGHERIO

Cust. P.O.	29646
Cust. Part#	C10B30SC0.732D
Charter Sales Order	177723
Heat #	454700
Ship Lot #	504138
Grade#	10B30 M SK FG RHQ
Process	DD
Finish Size	0.732

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed below and on the reverse side, and that it satisfies those requirements.

### Test Results of Heat Lot# 454700

Lab Code: 7388												
Chemistry	C	MN	P	S	SI	NI	CR	MO	CU	SN	V	
Wt%	0.31	0.76	0.007	0.009	0.260	0.06	0.10	0.03	0.09	0.005	0.001	
	AL	N	B	TI	NB							
	0.023	0.0060	0.0023	0.020	0.001							
Jominy (HRC)	JOM01	JOM02	JOM03	JOM04	JOM05	JOM06	JOM07	JOM08	JOM09	JOM10	JOM11	JOM12
	53	52	51	50	37	26	23	22	21	20	20	20
	JOM13	JOM14	JOM15	JOM16	JOM18	JOM20	JOM22	JOM24	JOM26	JOM28	JOM30	JOM32
	0	0	0	0	0	0	0	0	0	0	0	0

JOMINY SAMPLE TYPE ENGLISH = R JOMINY LAB = 0358-01  
CHEM. DEVIATION EXT.-GREEN = N/R  
E45 INCLUSION LAB = 0358-02

Cleanliness	ASTM-E45 Method A			
	A	B	C	D
	Thin	1.0	1.0	0.0
Heavy	0.0	0.0	0.0	0.5

### Test Results of Rolling Lot # 355092

QC DEVIATION EXT.-GREEN = N/R

### Test Results of Processing Lot # 504138

	# of Tests	Min Value	Max Value	Mean Value	
TENSILE (KSI)	3	95.6	96.5	96.2	TENSILE LAB = 0358-02
REDUCTION OF AREA (%)	3	51	53	52	RA LAB = 0358-02
ROCKWELL B (HRBW)	3	91	92	91	RB LAB = 0358-02
WIRE SIZE (Inches)	21	0.731	0.731	0.731	
WIRE OUT OF ROUND (Inches)	21	0.000	0.000	0.000	

QC DEVIATION EXT.-PROCESSED = N/R

Specifications: Meets customer specifications with any applicable Charter Steel exceptions for the following customer documents:  
Customer Document = UNYTITE Revision = 5 Dated = 8-MAY-2003

Additional Comments:

Charter Steel  
Saukville, WI, USA



Tim Leahy  
Manager of Quality Assurance  
12/18/2006

Fax number: ( ) - Rem: Load1,Mail0,Fax0

The following statements are applicable to the material described on the front of this test report:

1. Except as noted, the steel supplied for this order was melted, rolled and processed in the United States.
2. Mercury was not used during the manufacture of this product; nor was the steel contaminated with mercury during processing.
3. Unless directed by the customer, there are no welds in any of the coils produced for this order.
4. The laboratory that generated the analytical or test results can be identified by the following key:

Certificate Number	Lab Code	Laboratory		Address
0358-01	7388	CSMD	Charter Steel Melting Division	1658 Cold Springs Road, Saukville, WI 53080
0358-02	8171	CSR/D/ CSPD	Charter Steel Rolling/ Processing Division	1658 Cold Springs Road, Saukville, WI 53080
0358-03	123633	P4	Charter Steel Ohio Processing Division	6255 US Highway 23, Risingsun, OH 43457
0358-04	125544	CSC	Charter Steel Cleveland	4300 E. 49 <sup>th</sup> St., Cuyahoga Heights, OH 44125-1004
		-	Subcontracted test performed by laboratory not in Charter Steel system	

5. When run by a Charter Steel laboratory, the following tests were performed according to the latest revisions of the specifications listed below, as noted in the Charter Steel Laboratory Quality Manual:

Test	Possible Laboratory	Specification
Chemistry Analysis	CSMD	ASTM E415; ASTM E1019
Macroetch	CSMD	ASTM E381
Hardenability (Jominy)	CSMD	ASTM A255; JIS G0561
Grain Size	CSMD	ASTM E112
Tensile Test	CSR/D/CSPD, P4, CSC	ASTM E8; ASTM A370
Rockwell Hardness	CSR/D/CSPD, P4, CSC	ASTM E18; ASTM A370
Microstructure (spheroidization)	CSR/D/CSPD, P4	ASTM A892
Cleanliness	CSR/D/CSPD, CSC	ASTM E45

Charter Steel has been accredited to perform all of the above tests by the American Association for Laboratory Accreditation (A2LA). These accreditations expire 01/31/07.

All other test results associated with a Charter Steel laboratory that appear on the front of this report, if any, were performed according to documented procedures developed by Charter Steel and are not accredited by A2LA.

6. The test results on the front of this report are the true values measured on the samples taken from the production lot. They do not apply to any other sample.
7. This test report cannot be reproduced or distributed except in full without the written permission of Charter Steel. The primary customer whose name and address appear on the front of this form may reproduce this test report, subject to the following restrictions:
  - It may be distributed only to their customers
  - Both sides of all pages must be reproduced in full
8. This certification is given subject to the terms and conditions of sale provided in Charter Steel's acknowledgment (designated by our Purchase Order number) to the customer's purchase order. Both Purchase Order numbers appear on the front page of this Report.
9. Where the customer has provided a specification, the results on the front of this test report conform to that specification unless otherwise noted on this test report.



**CERTIFIED MATERIAL TEST REPORT**

<b>CUSTOMER ORDER NUMBER</b> P001168	<b>CUSTOMER PART NUMBER</b> B1045SC10000	<b>HEAT NUMBER</b> M22536	<b>WORK ORDER NUMBER</b> 203498 101	<b>DATE</b> 12/01/06
---	---	------------------------------	--	-------------------------

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

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

**ORDERED**

<b>GRADE</b> 1045	<b>SIZE</b> 1" RND	<b>LENGTH</b> 24' 10 1/2"
----------------------	-----------------------	------------------------------

**CUSTOMER SPECIFICATIONS**  
SAE 1045; ASTM E381-91

**CHEMICAL ANALYSIS - (BAR AVERAGE)**

C	Mn	P	S	Si	Ni	Cr	Mo	Cu	Sn	Al
0.45	0.80	0.007	0.028	0.24	0.08	0.12	0.04	0.18	0.008	0.003
V	Nb									
0.055	0.002									

GRAIN SIZE SPECIFICATION ASTM E112 FINE GRAIN 5-8

MACROCLEANLINESS SPECIFICATION ASTM E381

**PLATE I**

**PLATE II**

	S	R	C	
AVERAGE	1	1	1	NONE

DECARB SPECIFICATION ASTM E1077

F TOTAL= 0.004

PAGE 1

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

MACSTEEL  
3000 East Front Street  
Monroe, MI 48161

MACSTEEL-JACKSON   
MACSTEEL-FT SMITH   
MACSTEEL-MONROE

*Chris Lister*  
Quality Assurance Representative

**CERTIFIED MATERIAL TEST REPORT**

CUSTOMER ORDER NUMBER	CUSTOMER PART NUMBER	HEAT NUMBER	WORK ORDER NUMBER	DATE
P001168	B1045SC10000	M22536	203498 101	12/01/06

REPORT TO  
TRACO  
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" RND	24' 10 1/2"

CUSTOMER SPECIFICATIONS  
SAE 1045; ASTM E381-91

REDUCTION RATIO .

RATIO= .45.8 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  
3000 East Front Street  
Monroe, MI 48161

MACSTEEL-JACKSON   
MACSTEEL-FT SMITH   
MACSTEEL-MONROE

  
Quality Assurance Representative

*Multicert*

# Kerry Steel, Inc.

31731 Northwestern Hwy - Suite 200 - Farmington Hills, MI 48334  
(248) 352-0000 - (248) 865-9059

## CERTIFICATION OF STEEL ANALYSIS

Sold To: Prestige Stamping, Inc.  
23513 Groesbeck Hwy  
P.O. Box 1086  
Warren, MI 48089

P/O #: 14715 REL01  
Part #: P1480HOO

Work Order #: 186712 S/O #: 183541  
Size: 0.1220 x 5.5000 x Coil  
Desc: Hot Roll Pickled & Oiled C1040  
DOMESTIC CERTS REQUIRED.

C	Mn	P	S	AL	Si
0.36	0.82	0.013	0.003	0.037	0.400

Coil: 397399 Heat: C39553  
Mill Coil# :733497

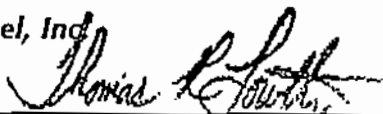
Coil #	Weight	Whse Coil #
397399-PA02	2411 Lbs	
397399-PA03	2411 Lbs	
397399-PA04	2411 Lbs	
397399-PA05	2411 Lbs	
397399-PA06	2411 Lbs	
397399-PA07	2411 Lbs	
397399-PA08	2411 Lbs	
397399-PA09	2411 Lbs	
397399-PB02	2411 Lbs	
397399-PB03	2411 Lbs	
397399-PB04	2411 Lbs	
397399-PB05	2411 Lbs	
397399-PB06	2411 Lbs	
397399-PB07	2411 Lbs	
397399-PB08	2411 Lbs	
397399-PB09	2411 Lbs	

Notes: MATERIAL MELTED AND MANUFACTURED IN THE USA.

11:30 AM ON

*This report may not be reproduced, except in full, without prior written permission from Kerry Steel, Inc.*  
in this report regarding the material identification, type, and size is based on customer furnished information and samples and is shown for reference purposes only. Test results relate only to the samples tested. \* All tests not performed by KERRY STEEL PROCESSING metallurgical testing laboratory are subcontracted to other AZLA accredited laboratories. The physical and chemical analysis shown above were supplied by the producing mill or were tested on our equipment and are certified as correct as contained in the records of the corporation, using the following standards: ASTM: A370, E8, E18, E415, E517, E643, E646. \*\*\* ISO 9001 - 2000 - AZLA ACCREDITED \*\*\* Certificate # 1540.01  
Kerry Steel Processing Metallurgical Testing Laboratory, 4343 Wyoming, Dearborn, Michigan 48126 (313) 581-3500

Kerry Steel, Inc.



HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17642

Invoice No. K09860

Invoice Date 01/25/07

Sales Order K09860

Cert No Inv Line No Item No

Quantity Lot No

Assembly No

Haydon PO  
A47284

31106 . 260000 PTU075175

890 JK961A

Heat  
454630



# INSPECTION CERTIFICATE

JK961A

SET LOT NO.

**UNYTITE, INC.**  
One Unytite Drive  
Peru, Illinois 61354

815-224-2221 — FAX # 815-224-3434



Specification	Size	Quantity
ASTM F1852 Type 1	3/4-10 UNC X 1-3/4	35,100 pcs.
ASTM A563 Grade DH		
ASTM F436 Type 1		

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

**BOLT LOT NO.** JK961

Date: Jan. 10, '07

Mechanical Property of Full Size Bolts				Heat Treatment		Chemical Composition %									
Tensile Strength	Proof Load 28400 (Length Method)	Hardness		Quench	Temper	C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100	Mo x 100	B x 10,000
		Max.	HRC												
Spec. 40100	Part of Screw	47-0.0005 in	34 MAX	-	800	30	15	60	40	Max.	50	-	-	-	-
Average 49750	Part of Screw	ALL PASS	30.7	1580	875	31	25	75	8	7	9	5	5	2	26



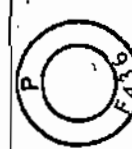
**NUT LOT NO.** JK791

Mechanical Property of Full Size Nuts				Heat Treatment		Chemical Composition %									
Hardness (HRC)	Hardness After 24 hr x 1000° F HRB	Proof Load (Lbf)	°F (°C)		C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100			
			Quench	Temper											
Spec. 24-38	HRB 89	58450	-	800	20	-	60	Max.	50	-	-	-			
Mean/5pcs. 28.5	-	ALL PASS	1562	1184	44	22	71	8	26	17	10	14			



**WASHER LOT NO.** WB8947

Mechanical Property of Washers		Chemical Composition %									
Hardness (HRC)	Proof Load (Lbf)	C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100		
										Spec. 38-45	ALL PASS
Mean/5 Pcs. 42.0	36	36	40	82	13	3	-	-	-		



**Fastener Tension**

Fastener Tension	Min.
Spec. (lbf.)	29000
Mean / 6 sets.	37672
Standard Deviation	1810

Thread Accuracy (Bolt & Nut)	REMARKS
Bolt ASME B1.1 Class 2A	OFFICIAL SEAL JEAN MARGHERIO NOTARY PUBLIC - STATE OF ILLINOIS MY COMMISSION EXPIRES: 10/18/08 01-11-07
Nut ANSI B1.1 Class 2B	

Material used for the bolt, nut and washer were melted & manufactured in the USA. The product was manufactured in the USA to ASTM specifications. The bolt and nut are manufactured by Unytite. We hereby certify that the material described has been manufactured and inspected satisfactory with requirement of the above specification.

Chief of Quality Assurance Section

*[Signature]*


 CHARTER  
STEEL

# CHARTER STEEL

 A Division of  
Charter Manufacturing Company, Inc.

**CHARTER STEEL TEST REPORT**  
 Reverse Has Text And Codes

 1658 Cold Springs Road  
 Saukville, Wisconsin 53080  
 (262) 268-2400  
 1-800-437-8789  
 FAX (262) 268-2570

**UNYTITE, INC.**  
**ONE UNYTITE DRIVE**  
**PERU, IL 61354-**  
**Attn: ATTEN: JEAN MARGHERIO**

Cust. P.O.	29646
Cust Part#	C10B30SC0.732D
Charter Sales Order	177723
Heat #	454630
Ship Lot #	504119
Grade#	10B30 M SK FG RHQ
Process	DD
Finish Size	0.732

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed below and on the reverse side, and that it satisfies those requirements.

**Test Results of Heat Lot# 454630**

Lab Code: 7388

Chemistry	C	MN	P	S	SI	NI	CR	MO	CU	SN	V
Wt%	0.31	0.75	0.008	0.007	0.250	0.05	0.05	0.02	0.09	0.006	0.001

	AL	N	B	TI	NB
	0.023	0.0070	0.0026	0.021	0.001

Jominy (HRC)	JOM01	JOM02	JOM03	JOM04	JOM05	JOM06	JOM07	JOM08	JOM09	JOM10	JOM11	JOM12
	53	51	50	41	26	22	21	20	20	20	0	0
	JOM13	JOM14	JOM15	JOM16	JOM18	JOM20	JOM22	JOM24	JOM26	JOM28	JOM30	JOM32
	0	0	0	0	0	0	0	0	0	0	0	0

 JOMINY SAMPLE TYPE ENGLISH = R JOMINY LAB = 0358-01  
 CHEM. DEVIATION EXT.-GREEN = N/R  
 E45 INCLUSION LAB = 0358-02

Cleanliness	ASTM-E45 Method A			
	A	B	C	D
Thin	1.0	1.5	0.0	0.5
Heavy	0.0	0.0	0.0	0.0

**Test Results of Rolling Lot # 355093**

QC DEVIATION EXT.-GREEN = N/R

**Test Results of Processing Lot # 504119**


	# of Tests	Min Value	Max Value	Mean Value	
TENSILE (KSI)	3	91.5	95.0	93.7	TENSILE LAB = 0358-02
REDUCTION OF AREA (%)	3	44	54	50	RA LAB = 0358-02
ROCKWELL B (HRBW)	3	91	92	91	RB LAB = 0358-02
WIRE SIZE (Inches)	10	0.731	0.731	0.731	
WIRE OUT OF ROUND (Inches)	10	0.000	0.000	0.000	

 QC DEVIATION EXT.-PROCESSED = N/R

 Specifications: Meets customer specifications with any applicable Charter Steel exceptions for the following customer documents:  
 Customer Document = UNYTITE Revision = 5 Dated = 8-MAY-2003

Additional Comments:

 Charter Steel  
 Saukville, WI, USA

  
 Tim Leahy  
 Manager of Quality Assurance  
 12/18/2006

Fax number: ( ) - Rem: Load1,Mail0,Fax0

The following statements are applicable to the material described on the front of this Test Report:

1. Except as noted, the steel supplied for this order was melted, rolled and processed in the United States.
2. Mercury was not used during the manufacture of this product; nor was the steel contaminated with mercury during processing.
3. Unless directed by the customer, there are no welds in any of the coils produced for this order.
4. The laboratory that generated the analytical or test results can be identified by the following key:

Certificate Number	Lab Code	Laboratory		Address
0358-01	7388	CSMD	Charter Steel Melting Division	1658 Cold Springs Road, Saukville, WI 53080
0358-02	8171	CSR/D/ CSPD	Charter Steel Rolling/ Processing Division	1658 Cold Springs Road, Saukville, WI 53080
0358-03	123633	P4	Charter Steel Ohio Processing Division	6255 US Highway 23, Risingsun, OH 43457
0358-04	125544	CSC	Charter Steel Cleveland	4300 E. 49 <sup>th</sup> St., Cuyahoga Heights, OH 44125-1004
		--	Subcontracted test performed by laboratory not in Charter Steel system	

5. When run by a Charter Steel laboratory, the following tests were performed according to the latest revisions of the specifications listed below, as noted in the Charter Steel Laboratory Quality Manual:

Test	Possible Laboratory	Specification
Chemistry Analysis	CSMD	ASTM E415; ASTM E1019
Macroetch	CSMD	ASTM E381
Hardenability (Jominy)	CSMD	ASTM A255; JIS G0561
Grain Size	CSMD	ASTM E112
Tensile Test	CSR/D/CSPD, P4, CSC	ASTM E8; ASTM A370
Rockwell Hardness	CSR/D/CSPD, P4, CSC	ASTM E18; ASTM A370
Microstructure (spheroidization)	CSR/D/CSPD, P4	ASTM A892
Cleanliness	CSR/D/CSPD, CSC	ASTM E45

Charter Steel has been accredited to perform all of the above tests by the American Association for Laboratory Accreditation (A2LA). These accreditations expire 01/31/07.

All other test results associated with a Charter Steel laboratory that appear on the front of this report, if any, were performed according to documented procedures developed by Charter Steel and are not accredited by A2LA.

6. The test results on the front of this report are the true values measured on the samples taken from the production lot. They do not apply to any other sample.
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8. This certification is given subject to the terms and conditions of sale provided in Charter Steel's acknowledgment (designated by our Purchase Order number) to the customer's purchase order. Both Purchase Order numbers appear on the front page of this Report.
9. Where the customer has provided a specification, the results on the front of this test report conform to that specification unless otherwise noted on this test report.



**GERDAU AMERISTEEL**

ST PAUL STEEL MILL  
 1678 RED ROCK ROAD  
 ST PAUL, MN 55119 USA  
 (651) 731-5600

Chemical and Physical Test Report

M-035248

PRODUCED IN: ST PAUL

SHIP TO UNYTITE INC 1 UNYTITE DRIVE PERU, IL 61354	INVOICE TO UNYTITE INC 1 UNYTITE DRIVE PERU, IL 61354	SHIP DATE 12/14/06	CUST. ACCOUNT NO 70000042
---	--	-----------------------	------------------------------

SHAPE + SIZE	GRADE	SPECIFICATION	SALES ORDER	CUST P.O. NUMBER
R158Q	C1045M23F	A29/A29M-05, A576-90B(2000)	608341S-01	P001070-01
HEAT I.D. M630019	C	Mn .44 P .008 S .028 Si .22 Cu .17 Ni .10 Cr .14 Mo .022 V .027 Nb .001 N .0082 Ti .002 Al .002 Sn .037 Ni .0082 V .027 Nb .001 N .0080 Ti .00200 Ca .00140 Co .008		

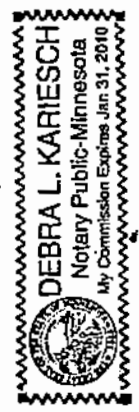
Mechanical Test: Red R 38.97  
 Grain Test: FINE Grain Size Units 5.0  
 Customer Requirements SOURCE: GA STP CASTING: STRAND CAST  
 CUST ITEM NUMBER: B1045SC1.00

SHAPE + SIZE	GRADE	SPECIFICATION	SALES ORDER	CUST P.O. NUMBER
R158Q	C1045M23F	A29/A29M-05, A576-90B(2000)	608341S-01	P001070-01
HEAT I.D. M630020	C	Mn .43 P .010 S .025 Si .23 Cu .21 Ni .10 Cr .16 Mo .023 V .027 Nb .001 N .0080 Ti .003 Al .003 Sn .021 Ni .0080 V .027 Nb .001 N .0080 Ti .00200 Ca .00130 Co .007		

Mechanical Test: Red R 38.97  
 Grain Test: FINE Grain Size Units 5.0  
 Customer Requirements SOURCE: GA STP CASTING: STRAND CAST  
 CUST ITEM NUMBER: B1045SC1.00

Quality Program Manual REV. 1, útā 6/10/05

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



ST PAUL STEEL MILL



**GERDAU AMERISTEEL™**

**Lead and Mercury Content of Steel**

Lead and mercury are not purposefully introduced in the Gerdau Ameristeel steel manufacturing process, and are not present at levels that would require disclosure on Material Safety Data Sheets. To the best of our knowledge, no mercury is present in our steel products.

Sincerely,

Gerdau Ameristeel

A. James Turner  
Director, Environment & Quality



**GERDAU AMERISTEEL™**

**Weld Repair of Finished Product**

We hereby certify that weld repair of finished products is not performed at Gerda Ameristeel.

Sincerely,

Gerda Ameristeel

A. James Turner  
Director, Environment & Quality

*Mill Cert*

# Kerry Steel, Inc.

31731 Northwestern Hwy - Suite 200 - Farmington Hills, MI 48334  
(248) 352-0000 - (248) 865-9059

## CERTIFICATION OF STEEL ANALYSIS

Sold To: Prestige Stamping, Inc.  
23513 Groesbeck Hwy  
P.O. Box 1086  
Warren, MI 48089

P/O #: 14715 REL01  
Part #: P1480HOO

Work Order #: 186712 S/O #: 183541  
Size: 0.1220 x 5.5000 x Coil  
Desc: Hot Roll Pickled & Oiled C1040  
DOMESTIC CERTS REQUIRED.

C	Mn	P	S	AL	Si
---	----	---	---	----	----

0.36 0.82 0.013 0.003 0.037 0.400

Coil: 397399 Heat: C39553  
Mill Coil# :733497

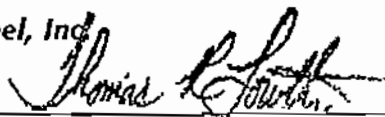
Coil #	Weight	Whse Coil #
397399-PA02	2411 Lbs	
397399-PA03	2411 Lbs	
397399-PA04	2411 Lbs	
397399-PA05	2411 Lbs	
397399-PA06	2411 Lbs	
397399-PA07	2411 Lbs	
397399-PA08	2411 Lbs	
397399-PA09	2411 Lbs	
397399-PB02	2411 Lbs	
397399-PB03	2411 Lbs	
397399-PB04	2411 Lbs	
397399-PB05	2411 Lbs	
397399-PB06	2411 Lbs	
397399-PB07	2411 Lbs	
397399-PB08	2411 Lbs	
397399-PB09	2411 Lbs	

Notes : MATERIAL MELTED AND MANUFACTURED IN THE USA.

*11:30 AM ON*

*This report may not be reproduced, except in full, without prior written permission.*  
in this report regarding the material identification, type, and size is based on customer furnished information and samples and is shown for reference purposes only. Test results relate only to the samples tested. \* All tests not performed by KERRY STEEL PROCESSING metallurgical testing laboratory are subcontracted to other A2LA accredited laboratories. The physical and chemical analysis shown above were supplied by the producing mill or were tested on our equipment and are certified as correct as contained in the records of the corporation, using the following standards: ASTM: A370, E8, E18, E415, E517, E643, E646. \*\*\* ISO 9001 - 2000 - A2LA ACCREDITED \*\*\* Certificate # 1540.01  
Kerry Steel Processing Metallurgical Testing Laboratory, 4343 Wyoming, Dearborn, Michigan 48126 (313) 581-3500

Kerry Steel, Inc



HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17642

Invoice No. K09860

Invoice Date 01/25/07

Sales Order K09860

Cert No Inv Line No Item No

Quantity Lot No

Assembly No

22600 . 280000 HBA076100

10 C O F C

Haydon PO  
A42388



Bob Sadowski



Sincerely,

Our suppliers chemical and physical test reports, on all through hardened product, are available upon request.

280 - 3/4 (10) X 11 LG Hex Cap.

This letter will certify that the merchandise shipped to you against your P.O. #42388 has been purchased by Heads & Threads International from its suppliers with the understanding that this product was manufactured to and conforms with the current and applicable ANSI, ASME, ASTM, SAE or IRI specifications as shown in the IRI Fasteners Manual sixth edition.

Haydon Rolfs Inc  
1181 Unity Street  
Philadelphia Pa. 19124-3196

DATE 11/17/04



Heads & Threads International LLC  
200 Kennedy Drive  
Sayreville, NJ 08672  
Tel: 732.727.5800  
headsandthreads.com

Fax: Accounting 732.727.7130  
Corporate 732.727.9261  
Sales 732.727.5640  
Purchasing 732.727.3555  
732.727.5688

# HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17642

Invoice No. K09860

Invoice Date 01/25/07

Sales Order K09860

Cert No Inv Line No Item No

Quantity Lot No

Assembly No

22574 290000 HBA075800

15 C O F C

Haydon PO  
A42387

02004-02558  
 REGISTRARS, INC.

December 14, 2006  
 Registration Date

September 19, 2006  
 Registration No. 2006

The quality of this certificate is maintained through ongoing interchanges



Perry Johnson Registrars, Inc. (PJRI)  
 26555 Evergreen, Suite 1310  
 Strongsville, Ohio 44136  
 (248) 238-3588

*[Signature]*  
 For PJRI

Manufacture and Distribution of Metal Fasteners for the Automotive Industry  
 (Purchasing, Sales, and Warehousing Activities Supported by Strongsville, OH Location)  
 (Manufacturing Activities Supported by Cleveland, OH Location)

Supplies are provided by the registrant in accordance with the requirements of the ISO 9001:2000 standard. The registrant has been certified by the Registrar as a registered supplier of products. The registrant is a member of the Registrar's Quality Management System of products. The registrant is a member of the Registrar's Quality Management System of products. The registrant is a member of the Registrar's Quality Management System of products.

Registered to ISO 9001:2000 (Based on including ISO 9002:1997)

The Registrar is a member of the Registrar's Quality Management System of products.



Perry Johnson Registrars, Inc. has awarded the Quality Management System of

Certificate of Registration

PERRY JOHNSON REGISTRARS, INC.



# HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17642

Invoice No. K09860

Invoice Date 01/25/07

Sales Order K09860

Cert No Inv Line No Item No

Quantity Lot No

Assembly No Haydon PO

23252 - 300000 HBA075700

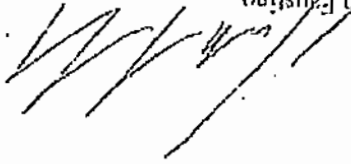
20 C O F C

Heat C O F C

A43413

E-mail: rfaustino@stela.com • Website: www.stela.com  
Atlanta • Cleveland • Dallas • Edmonton • Houston • Montreal • Toronto

Ralph Faustino  
Philadelphia Sales Manager



We certify that the products shown in our catalog conform to IFL standards.

To Whom It May Concern:

Certificate of Compliance

SALES OFFICE  
901 - 13th Avenue  
Prospect Park, PA 19076  
Phone: (610) 534-5628  
Fax: (610) 534-5664

**STELFAST INC.**  
ISO 9002 / QS 9000 CERTIFIED



# HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17642

Invoice No. K09860

Invoice Date 01/25/07

Sales Order K09860

Cert No Inv Line No Item No

Quantity Lot No

Heat

Assembly No

Haydon PO

24301 310000 HNA075

45 C OF C

C OF C

A43770

Atlanta • Cleveland • Dallas • Edmonton • Houston • Montreal • Toronto  
E-mail: rfaustino@stela.com • Website: www.stela.com

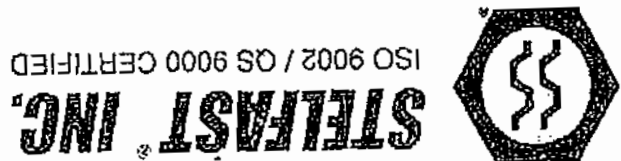
Ralph Faustino  
Philadelphia Sales Manager

We certify that the products shown in our catalog conform to IFT standards.

To Whom It May Concern:

Certificate of Compliance

SALES OFFICE  
901 - 13th Avenue  
Prospect Park, PA 19076  
Phone: (877) 999-7027  
(610) 534-5624  
Fax: (610) 534-5664



HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17642

Invoice No. K09860

Invoice Date 01/25/07

Sales Order K09860

Cert No Inv Line No Item No

Quantity Lot No

Heat

Assembly No

Haydon PO

30726 .320000 WFA075

45 C OF C

A45586





COATESVILLE WASHER COMPANY

DEC 01 2006

DEC 01 2006

CERTIFICATE OF COMPLIANCE

TO: HAYDON BOLTS, INC.  
1181 UNITY STREET  
PHILADELPHIA, PA 19124

DATE: November 28, 2006

PART: WASHERS, STEEL, PLAIN(FLAT), UNHARDENED FOR GENERAL  
USE.

SPEC.: ASTM F844 & ANSI B18.22.1

FINISH : PLAIN, ZINC & CLEAR DICHROMATE , HOT DIP GALV. &  
MECH. GALV.

GENTLEMEN:

I HEREBY CERTIFY THAT THE ABOVE SUPPLIES CALLED FOR BY  
PURCHASE ORDER/CONTRACT A45586 WERE MANUFACTURED IN  
CHINA USING MILD STEEL , IN ACCORDANCE WITH ALL APPLICABLE  
SPECIFICATIONS, AND THAT SUCH SUPPLIES WERE IN THE QUANTITY  
AND QUALITY CALLED FOR, AND WERE IN ALL RESPECTS IN  
ACCORDANCE WITH THE APPLICABLE SPECIFICATIONS. ALL  
DIMENSIONAL-INSPECTION REPORTS ARE ON FILE AND AVAILABLE FOR  
REVIEW UPON REQUEST. CHEMICAL & PHYSICAL REPORTS ARE NOT  
AVAILABLE SINCE THEY ARE OPTIONAL AND NOT REQUIRED BY THE  
ABOVE REFERENCED SPECIFICATIONS.

COATESVILLE WASHER COMPANY

BY:

  
GENERAL MANAGER

PO# 17632

**Cert Summary Page HAYDON BOLTS, INC.**

AMERICAN STEEL FABRICATORS INC      **Customer PO** 17632  
**Invoice No.** B7011033      **Invoice Date** 01/24/07      **Sales Order** K09790  
**Cert No**    **Inv Line No**    **Item No**      **Quantity**    **Lot No**      **Heat**      **Assembly No**      **Haydon PO**  
15659      70000    AFA125400      14    171093A      NU 819025           A40645  
Description: 1-1/4(7)X 4" A490-1 BOLT      Manufacturer: NUCOR FASTENER DIV.  

---

31052      80000    VDH125      14    JK311      M22264           A44773  
Description: 1-1/4(7) HVY HEX NUT A563-DH      Manufacturer: UNYTITE INC.  

---

30739      90000    AAW125      14    212614      167418           A45484  
Description: 1-1/4 F436-1 STRUCTURAL WASHER      Manufacturer: WROUGHT WASHER MFG INC.

**RECEIVED**  
**JAN 29 2007**  
**AMERICAN STEEL**

# HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17632

Invoice No. B7011033

Invoice Date 01/24/07

Sales Order K09790

Cert No Inv Line No Item No

Quantity Lot No

Heat

Assembly No

Haydon PO  
A40645

15659 70000 AFA125400

14 171093A

NU 819025

-NOTARY PUBLIC, CRYSTAL D. GIBBS/BJE

DATE OF EXPIRATION  
1-18-27

MECHANICAL FASTENER  
CERTIFICATE NO. AZLA 139-01  
EXPIRATION DATE 12/31/03



MORTON SCHAEFER  
QUALITY ASSURANCE SUPERVISOR

Morton Schaefer  
A DIVISION OF NUCOR CORPORATION  
NUCOR FASTENER

ALL TESTS ARE IN ACCORDANCE WITH THE LATEST REVISIONS OF THE METHODS DESCRIBED IN THE APPLICABLE SAE AND ASTM SPECIFICATIONS. THE SAMPLES TESTED CONFORM TO THE SPECIFICATIONS AS DESCRIBED/LISTED ABOVE AND WERE MANUFACTURED FREE OF MERCURY CONTAMINATION. THE STEEL WAS HEATED AND MANUFACTURED IN THE U.S.A. AND THE PRODUCT WAS MANUFACTURED AND TESTED IN THE U.S.A. WE CERTIFY THAT THIS DATA IS A TRUE REPRESENTATION OF INFORMATION PROVIDED BY THE MATERIAL SUPPLIER AND OUR TESTING LABORATORY. THIS CERTIFIED MATERIAL TEST REPORT RELATES ONLY TO THE ITEMS LISTED ON THIS DOCUMENT AND MAY NOT BE REPRODUCED EXCEPT IN FULL.

---DIMENSIONS PER ASME B18.2.6-1996

CHARACTERISTIC	#SAMPLES TESTED	MINIMUM	MAXIMUM
Width Across Corners	2	2.2680	2.2700
Grip Length	2	1.8630	1.8960
Head Height	2	0.7800	0.7860
Threads	2	PASS	PASS

---MECHANICAL PROPERTIES IN ACCORDANCE WITH ASTM A490-02

SURFACE CORE	HARDNESS	(RC)	(R50N)	N/A	N/A
PROOF LOAD	116300 LBS	35.5	35.4	35.3	35.7
6 DEG-MEDGE		164531	162827	160036	168916
TENSILE STRENGTH		16795	16795	16036	168916

---MET MAGNETIC PARTICLE INSPECTION IN ACCORDANCE WITH ASTM A490 80 PCS. SAMPLED

LOT PASSED

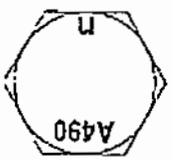
---CHEMISTRY

MATERIAL GRADE - A490

\*\*CHEMISTRY COMPOSITION (WT% HEAT ANALYSIS) BY MATERIAL SUPPLIER

HEAT	NUMBER	HN	P	S	SI	CR	MO	V
RHD020299	HU 819025	.34	.88	.011	.018	.24	.95	.19
		.30				.020		

AZLA NO: 780.01 EXP: 2004-11-30 FOR CHEMICAL TESTING



CUSTOMER NO/NAME  
554 HAYDON BOLTS INC  
TEST REPORT SERIAL# FB217628  
TEST REPORT ISSUE DATE 9/25/03  
DATE SHIPPED 10/01/03  
NAME OF LAB SAMPLER: FRANKLIN A. HEAL, LAB TECHNICIAN  
CUSTOMER P.O. # A 40645  
QUANTITY LOT NO. DESCRIPTION  
900 171093A 1 1/4" X 4 490 HVY HEX STRUC SCREEN PLATH  
MANUFACTURE DATE 9/11/03

FASTENER DIVISION

NUCOR

LOT NO. 171093A

# HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17632

Invoice No. B7011033

Invoice Date 01/24/07

Sales Order K09790

Cert No 31052  
Inv Line No 80000  
Item No VDH125

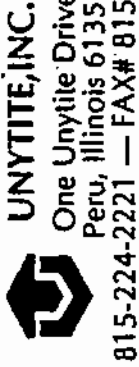
Quantity 14  
Lot No JK311

Heat M22264

Assembly No

Haydon PO  
A44773

# INSPECTION CERTIFICATE



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

Customer	Specification	Size	Lot No.	Date
	ASTM A-563 GRADE DH HEAVY HEX NUT	1-1/4-7 UNC	JK311	Dec. 21, '06

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

Chemical Composition (%)												
Milli Maker	Material Size	Heat No.	Spec.	C	Si	Mn	P	S	Cu	Ni	Cr	Mo
MCSTEEL	CARBON			0.20 0.55	-	MIN. 0.60	MAX. 0.040	MAX. 0.050	-	-	-	-
	STEEL	M22264		0.44	0.23	0.80	0.015	0.028	0.16	0.06	0.17	0.03
Mechanical Property Inspection												
Item	Proof Load	Cone Stripping	Hardness	Hardness	Absorbed Energy	Heat Treatment						
Spec.	169,575 lbf	-	24-38	H <sub>K</sub> C	J • kgfm • ftlbf	T: MIN. 800 F						
	n	n	29.0 29.1 29.4 29.2 29.1	H <sub>K</sub> B • HB		Q: FORGING Q (W.Q.)						
Results	Results	Results	29.2	After 24 Hr.X	at	T: 1193 F/45M. (W.C.)						
	GOOD					Q: Quenching T: Tempering ST: Solution Treatment						

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 19,533 pcs.  OFFICIAL SEAL JEAN MARGHERIO NOTARY PUBLIC - STATE OF ILLINOIS MY COMMISSION EXPIRES: 10/18/09

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.

### CERTIFIED MATERIAL TEST REPORT

CUSTOMER ORDER NUMBER	CUSTOMER PART NUMBER	HEAT NUMBER	WORK ORDER NUMBER	DATE
P001071	B1045SC15625	M22264	202652 101	11/14/06

REPORT TO  
TRACO  
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"

### CUSTOMER SPECIFICATIONS

SAE 1045; ASTM E381-91

### CHEMICAL ANALYSIS - (BAR AVERAGE)

C	Mn	P	S	Si	Ni	Cr	Mo	Cu	Sn	Al
0.44	0.80	0.015	0.028	0.23	0.06	0.17	0.03	0.16	0.008	0.004
V	Nb									
0.054	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

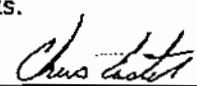
F TOTAL= 0.006

PAGE 1

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

MACSTEEL  
3000 East Front Street  
Monroe, MI 48161

MACSTEEL-JACKSON   
MACSTEEL-FT SMITH   
MACSTEEL-MONROE

  
Quality Assurance Representative

### CERTIFIED MATERIAL TEST REPORT

CUSTOMER ORDER NUMBER	CUSTOMER PART NUMBER	HEAT NUMBER	WORK ORDER NUMBER	DATE
P001071	B1045SC15625	M22264	202652 101	11/14/06

REPORT TO  
TRACO  
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"

#### CUSTOMER SPECIFICATIONS

SAE 1045; ASTM E381-91

#### 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  
3000 East Front Street  
Monroe, MI 48161

MACSTEEL-JACKSON   
MACSTEEL-FT SMITH   
MACSTEEL-MONROE

  
Quality Assurance Representative



# HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17632

Invoice No. B7011033

Invoice Date 01/24/07

Sales Order K09790

Cert No 30739

Inv Line No 90000

Item No AAW125

Quantity 14

Lot No 212614

Heat

167418

Assembly No

Haydon PO

A45484

**STAMPING THE FUTURE**  
WROUGHT WASHER MFG., INC.



November 29, 2006

**Certification of Compliance**

007594  
HAYDON BOLTS, INC  
1181 UNITY STREET  
PHILADELPHIA, PA 19124

Wrought Washer  
Ordr/Lot Number  
212614

Heat Number	Chemical Analysis				
	C	Mn	P	S	Si
167418	0.370	0.900	0.013	0.001	0.195

Purchase Order Number	Part Description	Date Shipped	Quantity Shipped
A45484-DEC	1 1/4 S MARK HT	11/29/2006	2,100

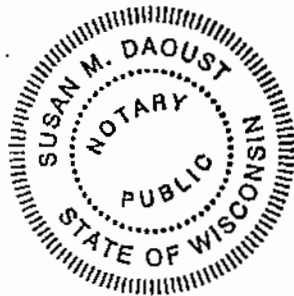
We hereby certify that the subject parts conform to the requirements of the applicable specification indicated for the subject parts and are in complete conformance to F436-04. We hereby certify that the subject parts were hardened to RC 38-45.

We hereby certify that all statutory requirements as to American Production and Labor Standards and all conditions of purchase applicable to the transaction have been complied with and that the subject parts were melted and manufactured in the U.S.A.

Truly yours,  
Wrought Washer Mfg., Inc.

Paul Schaefer  
Q.C. Manager

Sworn and subscribed before me on November 29, 2006  
My commission expires June 21, 2009



(030) SMARK, HT, F436  
WW INTERNAL USE : 48487902/006/017338/33022

**NUCOR**  
SHEET MILL GROUP

Mucor Steel-Crawfordsville  
4537 South Mucor Road  
Crawfordsville, IN 47933-9450

Order Number: 159381 - 0004  
Order Dimensions: 0.1380 in X 48.0000 in  
H&PO, RTLL, 1035

SAE J403 1035

METALLURGICAL TESTING CERTIFICATION

C105974

Certificate Number: 170664  
Date Issued: 20060412  
Page: 2 of 2

Customer Name: BROUGHT WASKER MFG. INC.  
Customer Address: 2100 SOUTH BAY STREET

HOLLANDKEE WI 53207

Cust PO Number: H1229

Coil Number 1039345.000  
Rockwell B: 86

Part Number 842149

TRILL

Heat	Slab	C	Mn	P	S	Si	Cu	Sn	Ni	Cr	Mo	Al	N	V	Nb	Ti	B	Sb
167418	01	0.37	0.900	0.013	<0.001	0.195	0.092	0.011	0.033	0.073	0.011	0.038	0.009	<0.001	0.001	0.003	<0.001	0.002

CHEMICAL ANALYSIS

Coil Number 1039346.000  
Rockwell B: 86

Part Number 842149

TRILL

Heat	Slab	C	Mn	P	S	Si	Cu	Sn	Ni	Cr	Mo	Al	N	V	Nb	Ti	B	Sb
167418	02	0.37	0.900	0.013	<0.001	0.195	0.092	0.011	0.033	0.073	0.011	0.038	0.009	<0.001	0.001	0.003	<0.001	0.002

CHEMICAL ANALYSIS

**NO 33022**

WE HEREBY CERTIFY THE ABOVE IS CORRECT AS CONTAINED IN THE RECORDS OF THE CORPORATION  
MELTED AND ROLLED IN THE USA

NUCOR QUALITY ASSURANCE

Standard Heat Treating, LLC  
**Certification**

Order No.: 94508  
Date: 06/05/2006  
Entry Date: 05/31/2006  
Page: 1 of 1

**To:**

Wrought Washer Mfg., Inc  
2100 South Bay Street

Purchase Order No.: 212614

Packing List No.:

Milwaukee WI 53207

Material: 1040

Standard Heat Treating certifies the listed results of inspection and testing to accurately reflect the processes performed and data obtained as a result of our heat treatment of the specified product.

Quantity	Part Number / Part Name / Part Description	Pounds
134,616	017338 886089	18650

Insp. Type	Scale	Minimum	Maximum	Number	Other
<b>Customer Requirements:</b>					
Test	RC	38.	45.		38-45 HRC

Austentized and quenched and tempered to obtain a hardness of 39-43 HRC.

Alternate signature may include Jim Perkne (Dir., Customer Service) or Efrain Santoyo (Dir., Production), Walter Santoyo (Office Manager) or Paul Wilson (Inspector).



John Soltys  
Director, Quality  
Standard Heat Treating, LLC

**AMERICAN STEEL FABRICATORS, INC.**  
 328 SAWMILL ROAD, P.O. BOX 185  
 GREENFIELD, N.H. 03047

**PURCHASE ORDER**

*for Bob Royle  
 Bert  
 EL*

Show this Purchase Order Number  
 on all correspondence, invoices,  
 shipping papers and packages.

*Copies  
 218*

**17632**

TEL. (603) 547-6311 FAX (603) 547-2770

TO Haydon  
1-800-326-1321

DATE <u>11/24/07</u>	REQUISITION NO.
SHIP TO <b>328 SAW MILL RD., RTE 31</b>	

Mill Certs Required  
 All Material ASTM  
 GRADE A 490

REQUISITIONED BY	WHEN SHIP	SHIP VIA	J.O.B. POINT	TERMS	QTY. ORDERED	QTY. RECEIVED	STOCK NO./DESCRIPTION	UNIT PRICE	TOTAL
>	<u>today</u>	<u>UPS</u>					<u>(06-329 Mercy Hospital) SK</u>		
					<u>14</u>		<u>Hex 1 1/4" x 4" A490</u>	<u>4.75</u>	<u>66.50</u>
					<u>14</u>		<u>Nuts 1 1/4" A490</u>	<u>N/A</u>	
					<u>14</u>		<u>Washers 1 1/4" A490</u>	<u>N/A</u>	
							<u>Ship directly to</u>		
							<u>Mercy Hospital</u>		
							<u>1121 Commercial St</u>		
>							<u>Portland Me 04102</u>		
							<u>Attn Butch Davis</u>		
							<u>207-380-5364</u>		

- Please send \_\_\_\_\_ copies of your invoice.
- Order is to be entered in accordance with prices, delivery and specifications shown above.
- Notify us immediately if you are unable to ship as specified.

*Cathy Larehille*  
 AUTHORIZED BY

**Cert Summary Page HAYDON BOLTS, INC.**

AMERICAN STEEL FABRICATORS INC      **Customer PO** 17632

**Invoice No.** B7011033      **Invoice Date** 01/24/07      **Sales Order** K09790

Cert No	Inv Line No	Item No	Quantity	Lot No	Heat	Assembly No	Haydon PO
15659	70000	AFA125400	14	171093A	NU 819025		A40645
Description: 1-1/4(7)X 4" A490-1 BOLT      Manufacturer: NUCOR FASTENER DIV.							
31052	80000	VDH125	14	JK311	M22264		A44773
Description: 1-1/4(7) HVY HEX NUT A563-DH      Manufacturer: UNYTITE INC.							
30739	90000	AAW125	14	212614	167418		A45484
Description: 1-1/4 F436-1 STRUCTURAL WASHER      Manufacturer: WROUGHT WASHER MFG INC.							

**RECEIVED**  
**JAN 29 2007**  
**AMERICAN STEEL**

# HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17632

Invoice No. B7011033

Invoice Date 01/24/07

Sales Order K09790

Cert No 15659

Inv Line No 70000

Item No AFA125400

Quantity 14

Lot No 171093A

Heat NU 819025

Assembly No

Haydon PO

A40645

# NUCOR

## FASTENER DIVISION

CUSTOMER NO/NAME  
354 HAYDON BOLTS INC

TEST REPORT SERIAL# FB217628

TEST REPORT ISSUE DATE 9/25/03

DATE SHIPPED 10/01/03

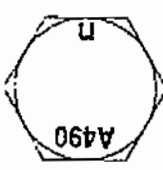
NAME OF LAB SAMPLER: FRANKLIN A. NEAL, LAB TECHNICIAN

NUCOR PART NO QUANTITY LOT NO. DESCRIPTION

168160 908 171093A 1 1/4-7 X 4 A490 HVY HEX

MANUFACTURE DATE 9/11/03

STRUCTURE PLAIN



### CHEMISTRY

MATERIAL GRADE -A135H1V

MATERIAL HEAT

CHEMISTRY COMPOSITION (HTX HEAT ANALYSIS) BY MATERIAL SUPPLIER

NUMBER NU 819025

C MN P S SI CR HO V

MIN .30

.88 .011 .018 .24 .95 .020

MAX .48

.040

PROOF LOAD TENSILE STRENGTH

6 DEG-WEDGE

SURFACE CORE

HARDNESS (RC)

35.5 PASS 164551 169795

36.4 PASS 162827 168036

AVERAGE VALUES FROM TESTS

PRODUCTION LOT SIZE 950 PCS

168916

NET MAGNETIC PARTICLE INSPECTION IN ACCORDANCE WITH ASTM A490 80 PCS, SAMPLED

LOT PASSED

MICROHARDNESS TEST RESULT IN ACCORDANCE WITH SAE J121(HKN)

POSITION 1. 376 2. 387 3. 376

CARBURIZATION/DECARBURIZATION TEST IN ACCORDANCE WITH A490 - LOT PASSED

HEAT TREATMENT - AUSTENITIZED, OIL QUENCHED & TEMPERED (MIN 800 DEG F)

DIMENSIONS PER ASME B18.2.6-1996

CHARACTERISTIC #SAMPLES TESTED

MINIMUM MAXIMUM

Width Across Corners 2 2.2680 2.2700

Orp Length 2 1.8630 1.8960

Head Height 2 0.7800 0.7860

Threads 2 PASS

PASS

PASS

PASS

NUCOR STEEL - NEBRASKA  
AZLA NO: 780.01 EXP: 2004-11-30  
FOR CHEMICAL TESTING



MECHANICAL FASTENER  
CERTIFICATE NO. AZLA 139-01  
EXPIRATION DATE 12/31/03

MORTON SCHAEFER  
QUALITY ASSURANCE SUPERVISOR

*Morton Schaefer*  
NUCOR FASTENER  
A DIVISION OF NUCOR CORPORATION

ALL TESTS ARE IN ACCORDANCE WITH THE LATEST REVISIONS OF THE METHODS DESCRIBED IN THE APPLICABLE SAE AND ASTM SPECIFICATIONS. THE SAMPLES TESTED CONFORM TO THE SPECIFICATIONS AS DESCRIBED/LISTED ABOVE AND WERE MANUFACTURED FREE OF MERCURY CONTAMINATION. THE STEEL WAS MELTED AND MANUFACTURED IN THE U.S.A. AND THE PRODUCT WAS MANUFACTURED AND TESTED IN THE U.S.A. WE CERTIFY THAT THIS DATA IS A TRUE REPRESENTATION OF INFORMATION PROVIDED BY THE MATERIAL SUPPLIER AND OUR TESTING LABORATORY. THIS CERTIFIED MATERIAL TEST REPORT RELATES ONLY TO THE ITEMS LISTED ON THIS DOCUMENT AND MAY NOT BE REPRODUCED EXCEPT IN FULL.



# HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17632

Invoice No. B7011033

Invoice Date 01/24/07

Sales Order K09790

Cert No 31052

Inv Line No 80000

Item No VDH125

Quantity 14

Lot No JK311

Heat M22264

Assembly No

Haydon PO

A44773

# INSPECTION CERTIFICATE



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

Customer	Specification	Size	Lot No.	Date
	ASTM A-563 GRADE DH HEAVY HEX NUT	1-1/4-7 UNC	JK311	Dec. 21, '06

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
MCSTEEL	CARBON			0.20 0.55	-	MIN. 0.60	MAX. 0.040	MAX. 0.050	-	-	-	-
	STEEL	M22264		0.44	0.23	0.80	0.015	0.028	0.16	0.06	0.17	0.03
Mechanical Property Inspection												
Item	Proof Load	Cone Stripping	Hardness	Hardness	Absorbed Energy	Heat Treatment						
Spec.	169,575 lbf	-	24-38	H <sub>RC</sub>	J • kgfm • ftlbf	T: MIN. 800 F						
	n	n		H <sub>RB</sub> • HB		Q: FORGING Q (W.Q.)						
	5	-				T: 1193 F/45M. (W.C.)						
Results	Results	Results	Results	Results	at	Q: Quenching T: Tempering ST: Solution Treatment						
	GOOD	-		After 24 Hr.X °F (°C)		Production Quantity 19,533 pcs.						

OFFICIAL SEAL  
 JEAN MARGHERIO  
 NOTARY PUBLIC - STATE OF ILLINOIS  
 MY COMMISSION EXPIRES: 10/18/08

Remarks:  
 "DH U"  
 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.

### CERTIFIED MATERIAL TEST REPORT

CUSTOMER ORDER NUMBER	CUSTOMER PART NUMBER	HEAT NUMBER	WORK ORDER NUMBER	DATE
P001071	B1045SC15625	M22264	202652 101	11/14/06

REPORT TO  
TRACO  
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"

CUSTOMER SPECIFICATIONS  
SAE 1045; ASTM E381-91

### CHEMICAL ANALYSIS - (BAR AVERAGE)

C	Mn	P	S	Si	Ni	Cr	Mo	Cu	Sn	Al
0.44	0.80	0.015	0.028	0.23	0.06	0.17	0.03	0.16	0.008	0.004
V	Nb									
0.054	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  
3000 East Front Street  
Monroe, MI 48161

MACSTEEL-JACKSON   
MACSTEEL-FT SMITH   
MACSTEEL-MONROE

  
Quality Assurance Representative

### CERTIFIED MATERIAL TEST REPORT

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

CUSTOMER SPECIFICATIONS  
SAE 1045; ASTM E381-91

#### 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  
3000 East Front Street  
Monroe, MI 48161

MACSTEEL-JACKSON   
MACSTEEL-FT SMITH   
MACSTEEL-MONROE

  
Quality Assurance Representative

# HAYDON BOLTS, INC.

AMERICAN STEEL FABRICATORS INC

Customer PO 17632

Invoice No. B7011033

Invoice Date 01/24/07

Sales Order K09790

Cert No 30739

Inv Line No 90000

Item No AAW125

Quantity 14

Lot No 212614

Heat

167418

Assembly No

Haydon PO

A45484

**STAMPING THE FUTURE**  
WROUGHT WASHER MFG., INC.



November 29, 2006

**Certification of Compliance**

007594  
HAYDON BOLTS, INC  
1181 UNITY STREET  
PHILADELPHIA, PA 19124

**Wrought Washer  
Ordr/Lot Number  
212614**

Heat Number	Chemical Analysis				
	C	Mn	P	S	Si
167418	0.370	0.900	0.013	0.001	0.195

Purchase Order Number	Part Description	Date Shipped	Quantity Shipped
A45484-DEC	1 1/4 S MARK HT	11/29/2006	2,100

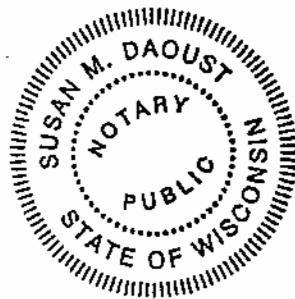
We hereby certify that the subject parts conform to the requirements of the applicable specification indicated for the subject parts and are in complete conformance to F436-04. We hereby certify that the subject parts were hardened to RC 38-45.

We hereby certify that all statutory requirements as to American Production and Labor Standards and all conditions of purchase applicable to the transaction have been complied with and that the subject parts were melted and manufactured in the U.S.A.

Truly yours,  
Wrought Washer Mfg., Inc.

Paul Schaefer  
Q.C. Manager

Sworn and subscribed before me on November 29, 2006  
My commission expires June 21, 2009



(030) SMARK, HT, F436  
WW INTERNAL USE : 48487902/006/017338/33022

**NUCOR**  
SHEET MILL GROUP

METALLURGICAL TESTING CERTIFICATION

C105979

Nucor Steel-Crawfordsville  
4537 South Nucor Road  
Crawfordsville, IN 47933-9450

Certificate Number: 170664  
Date Issued: 20060412  
Page: 2 of 2

Order Number: 158381 - 0004  
Order Dimensions: 0.1380 in X 48.0000 in  
HPP0, HILL, 1035

Customer Name: BROUGHT WASKER MFG. INC.  
Customer Address: 2100 SOUTH BAY STREET

MILWAUKEE

WI 53207

SAE J903 1035

Cust PO Number: H1229

Coil Number 1039345.000  
Rockwell B: 86

TAIL

Part Number 842149

CHEMICAL ANALYSIS

Heat	Slab	C	Mn	P	S	Si	Cu	Sn	Ni	Cr	Mo	Al	H	V	Nb	Ti	B	Sb
167418	01	0.37	0.900	0.013	<0.001	0.195	0.092	0.011	0.033	0.073	0.011	0.038	0.009	<0.001	0.001	0.003	<0.001	0.002

TAIL  
Rockwell B: 86

Coil Number 1039345.000  
Part Number 842149

CHEMICAL ANALYSIS

Heat	Slab	C	Mn	P	S	Si	Cu	Sn	Ni	Cr	Mo	Al	N	V	Nb	Ti	B	Sb
167418	02	0.37	0.900	0.013	<0.001	0.195	0.092	0.011	0.033	0.073	0.011	0.038	0.009	<0.001	0.001	0.003	<0.001	0.002

**M10 33022**

WE HEREBY CERTIFY THE ABOVE IS CORRECT AS CONTAINED IN THE RECORDS OF THE CORPORATION  
MELTED AND ROLLED IN THE USA

*[Signature]*  
NUCOR QUALITY ASSURANCE

Standard Heat Treating, LLC  
**Certification**

Order No.: 94508

Date: 06/05/2006

Entry Date: 05/31/2006

Page: 1 of 1

**To:**

Wrought Washer Mfg., Inc  
2100 South Bay Street

Purchase Order No.: 212614

Packing List No.:

Milwaukee WI 53207

Material: 1040

Standard Heat Treating certifies the listed results of inspection and testing to accurately reflect the processes performed and data obtained as a result of our heat treatment of the specified product.

Quantity	Part Number / Part Name / Part Description	Pounds
134,616	017338 886089	18650

Insp. Type	Scale	Minimum	Maximum	Number	Other
<b>Customer Requirements:</b>					
Test	RC	38.	45.		38-45 HRC

Austenitized and quenched and tempered to obtain a hardness of 39-43 HRC.

Alternate signature may include Jim Perkne (Dir., Customer Service) or Efrain Santoyo (Dir., Production), Walter Santoyo (Office Manager) or Paul Wilson (Inspector).



John Soltys  
Director, Quality  
Standard Heat Treating, LLC