
Appendix I

Specimen TCBF-B-1 to TCBF-B-4 Mill Certificate Report

Bill To: BROWN-STRAUSS STEEL
 ACCOUNTS PAYABLE - STEEL
 2495 URAVAN STREET
 AURORA 80011
 CO US

Ship To: 121
 BROWN STRAUSS STEEL
 4221 EAST MARIPOSA ROAD
 ROCKWELL TRACK #4
 STOCKTON 95215
 CA US

Order Date: 04/24/2008
 PO No: 61391
 Mill Order No: 3472634
 Load No: 1206462
 Manifest No: 1913453

CERTIFIED MATERIAL TEST REPORT
 GERDAU AMERISTEEL
 Midlothian Mill
 300 Ward Road
 Midlothian, TX 76065
 (972) 775-8241

SIZE: W 24 X .58# / W610 X .101
 GRADE: 992/572-50
 LENGTH: 45 FT / 13.716 M
 PRODUCT: WF BEAMS

SPECIFICATIONS:
 ASTM A6-05a, A992-06a, A572-06

HEAT NO: 22477490

CHEMICAL ANALYSIS									
C	Mn	P	S	Si	Cu	Ni	Cr	Mo	Sn
.09	.94	.018	.038	.28	.38	.10	.14	.029	.013
PHYSICAL PROPERTIES									
Yield Strength		Tensile Strength		Specimen Area		Elongation		Bend Test	
KSI	MPa	KSI	MPa	Sq In	Sq cm	%	Gage Length	Dia. Result	ROA %
54.2	373.7	71.7	494.4	0.867	5.59	25.4	8 In 200 mm		
52.0	358.5	71.8	495.0	0.861	5.55	25.9	8 In 200 mm		

9890
98901

J E B P

All manufacturing processes of this product, including electric arc melting and continuous casting, occurred in the U.S.A. CMTR complies with DIN EN 10204 3.1.B

"I hereby certify that the contents of this report are correct and accurate. All tests and operations performed by this material manufacturer or its sub-contractors, when applicable, are in compliance with the requirements of the material specifications and applicable purchaser designated requirements."

Signed: Tom L. Harrington Date: Jul. 12, 2008 Signed: Notary Public (if applicable) Date: _____
 Tom L. Harrington: Quality Assurance Manager Page: 1 of 1

CERTIFIED MATERIAL TEST REPORT

Order Date: 02/12/2008
 PO No: 59471
 Mill Order No: 3436184
 Load No: 1177346
 Manifest No: 1885714

Ship To: 5
 BROWN-STRAUSS STEEL
 BROWN-STRAUSS STEEL
 ZTS 3277100
 SOUTH FONTANA

Bill To:
 BROWN-STRAUSS STEEL
 ACCOUNTS PAYABLE - STEEL
 2495 URAVAN STREET
 AURORA
 CO US
 80011

PRODUCT
 WF BEAMS

LENGTH
 60 FT / 18.288 M

GRADE
 992/572-50

SIZE
 W 24 X 117# / W610 X 174

SPECIFICATIONS

ASTM A6-05a, A992-06a, A572-06

HEAT NO: 30406710

CHEMICAL ANALYSIS

C	0.07	1.13	0.010	0.033	0.22	0.30	0.09	0.07	0.015	0.015	0.003	0.004	0.019	0.3

PHYSICAL PROPERTIES

Yield Strength	KSI	MPa	Tensile Strength	KSI	MPa	Specimen Area		Elongation		Bend Test		ROA
						Sq In	Sq cm	%	Gage Length	Dia.	Result	
52.6	362.7	52.6	68.6	473.0	52.6	1.294	8.35	25.0	8 In	200 mm		
52.2	359.9	52.2	68.4	471.6	52.2	1.341	8.65	25.6	8 In	200 mm		

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HVPL

All manufacturing processes of this product, including electric arc melting and continuous casting, occurred in the U.S.A.
 CMTR complies with DIN EN 10204 3.1.B

"I hereby certify that the contents of this report are correct and accurate. All tests and operations performed by this material manufacturer or its sub-contractors, when applicable, are in compliance with the requirements of the material specifications and applicable purchaser designated requirements."

Signed: Tom L. Harrington Date: Mar. 11, 2008 Signed: Notary Public (if applicable) Date: _____
 Tom L. Harrington: Quality Assurance Manager Page: 2 of 2

SSAB

12400 Highway 43 North, Axis, Alabama 36505

Test Certificate

Form TC1: Revision 1: Date 31 Oct 2000

Customer: GARY STEEL C/O NAMASCO 500-500 COLONIAL CENTER PARKWA ROSWELL, GA 30076 1606		Customer P.O. No.: 6148242		Mill Order No.: 41-226583-11		Shipping Manifest : AR060408	
Product Description: ASTM A572-50/M345(06)/A709-50/M345(06A)				Ship Date: 26 Jul 08		Cert No: 081147198 (Page 1 of 1)	
Size: 0.750 X 96.00 X 480.0 (IN)				Cert Date: 26 Jul 08			

Tested Pieces				Tensiles				Charpy Impact Tests			
Heat Id	Piece Id	Piece Dimensions	Tst Loc	YS (PSI)	UTS (PSI)	%RA Elong % 2in 8in	Tst Dir	Average Hardness	Abs. Energy(FTL.B) 1 2 3 Avg	% Shear 1 2 3 Avg	Tst Tmp
M8G153	B08	0.750 X 96.00 (DISCRD)	IL58000	71000		26	T				

Chemical Analysis											
Heat Id	C	Mn	P	S	Si	Tot Al	Cu	Ni	Cr	Mo	TI
M8G153-B08	.06	1.33	.011	.008	.32	.028	.25	.10	.14	.04	.018
ORCN USA											

MERCURY IS NOT A METALLURGICAL COMPONENT OF THE STEEL AND NO MERCURY WAS INTENTIONALLY ADDED DURING THE MANUFACTURE OF THIS PRODUCT
100% MELTED AND MANUFACTURED IN THE USA. MTR DIN EN12204 TYPE 3.1 COMPLIANT.
M8G153 BC8
PCES: 4, WGT: 33234

stock
pc19011

Cust Part #:

WE HEREBY CERTIFY THAT THIS MATERIAL WAS TESTED IN ACCORDANCE WITH THE APPROPRIATE SPECIFICATION

Jason Thomas
SENIOR METALLURIST





MILL CERTIFICATE
ORIGINAL

M/C No. MC0000027692
Date 08/13/2008
THIS PIPE AND TUBE MADE IN U.S.A.

BL No. SH0000029199
Destination BROWN-STRAUSS STEEL INC-STK
Supplier BROWN-STRAUSS STEEL INC-CO

MARUICHI AMERICAN CORPORATION
11529 GREENSTONE AVENUE
SANTA FE SPRINGS, CALIFORNIA
TEL: (562) 903-8600 FAX: (562) 903-8601

SPEC	No of PCS	Hydrostatic Test	Chemical Composition(Ladle Analysis)											Tensile Test			Bending Test	Flattening Test	Remarks
			C (%) X 100	Si (%) X 100	Mn (%) X 100	P (%) X 1000	S (%) X 1000	Cu (%) X 1000	Ni (%) X 1000	Cr (%) X 1000	Mo (%) X 1000	V (%) X 1000	Yield Strength (PSI)	Tensile Strength (PSI)	Elongation (%)				
1ASTM A500 GRADE B ERW TUBING 5IN x 5IN x 0.313IN x 48FT 62600	12 4.982	Test Pressure Result	15	1	76	17	6						56000	68100	37		HT#: F3979 SC#: SA0000038716		
2ASTM A500 GRADE B ERW TUBING 12IN x 6IN x 0.375IN x 48FT 62600	4 3.724		16	1	75	16	4						52900	63100	37		HT#: F3977 SC#: SA0000038785		
3ASTM A500 GRADE B ERW TUBING 5IN x 5IN x 0.313IN x 30FT 62600	12 3.114		15	1	76	17	6						56000	68100	37		HT#: F3979 SC#: SA0000038716		
4ASTM A500 GRADE B ERW TUBING 6IN x 6IN x 0.313IN x 40FT 62705	12 5.088		16	1	67	7	7						58900	69500	38		HT#: F3958 SC#: SA0000038810		
5ASTM A500 GRADE B ERW TUBING 5IN x 5IN x 0.25IN x 32FT 63191	9 2.039		16	2	81	12	5						57500	70500	31		HT#: F3981 SC#: SA0000039169		
6ASTM A500 GRADE B ERW TUBING 8IN x 10IN x 0.375IN x 40FT 63191	4 3.104		16	1	75	14	4						52700	64900	39		HT#: F3971 SC#: SA0000039175		

We hereby certify that the material described herein conforms fully to the said specification.

Remarks:

J F Q D

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MARUICHI AMERICAN CORPORATION

R. J. Jones
(Quality Control)

MILL TEST CERTIFICATE



HISTEEL CO., LTD.

HEAD OFFICE : 89810CK 4LOT, GOZANDONG, NAMDOONG-KU, INCHEON, KOREA
 TEL : (032)815-6386-8
 FAX : (032)815-6389
 SEUL OFFICE : 57-8, CHUNGJU-RO 3-GA, JUNG-KU, SEUL, KOREA
 TEL : (02)2273-2141-3
 FAX : (02)2273-2157

Star Safford

CUSTOMER : SEAH STEEL AMERICA, INC

SPECIFICATION : ASTM A500 GR. B

TYPE OF PIPE END	DIMENSION (OUTDIA. x THICK. x LENGTH)	QUAN- TITY (PCS)	WEIGHT (KG)	HYDRO-STATIC TEST		HEAT-NO.	TENSILE TEST				CHEMICAL COMPOSITION																IMPACT TEST																																																																																																																																																																																																																																																																																																																																																																																																																																																													
				Kg/cm ² PSI	#5		YIELD STREN- GTH	TENSILE STRENGTH		(EL)	C	Si	Mn	P	S	Cu	Ni	Cr	Mo	Nb	V	Ti	B	HARDNESS	Ceq	ENERGY	SHEAR-VALUE	(H)																																																																																																																																																																																																																																																																																																																																																																																																																																																												
								B #6	W #7																				PSI	#8	X100	X100	X1000	X100	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000	X1000

*9	P. S. A	*10	VISUAL & DIMENSION TEST	*11	FLATTENING (B) TEST	*12	WELD DUCTILITY TEST	*13	NONDESTRUCTIVE TEST (U.I.)	*14	DRIFT TEST	*15	FLARING TEST	*16	CRUSH TEST	*17	REVERSE FLATTENING
			GOOD														

NOTE 1 *1 Type of pipe End

BPE : Black Plain End Square-cut	GPE : Galvanized Plain End Square-cut
BPEB : Black Plain End Beveled	GPEB : Galvanized Plain End Beveled
BTC : Black Threaded & Coupled	GTC : Galvanized Threaded & Coupled
BVJ : Black Victaulic Joint	GVJ : Galvanized Victaulic Joint
ETC : Enamelled Threaded & Coupled	

- * 2 NB: Normal Bore, OD: Outside Diameter
- * 4 Unit (M: Meter, F: Feet, I: Inch)
- * 7 W : Weld Part
- * 9 POST SEAM ANNEALING
- * 12 Weld Ductility Test
- * 15 Flaring Test
- * 3 Unit (M: mm, I: inch)
- * 6 Base Metal
- * 8 H: Heat (Ladle) Analysis, P: Product Analysis
- * 11 Flattening or Bending Test
- * 14 Drift Test
- * 17 Reverse Flattening Test
- * 5 G: Good
- * 10 Visual & Dimension Test
- * 13 Nondestructive Test
- * 16 Crush Test

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WE HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN ACCEPTED IN ACCORDANCE WITH THE PRESCRIBED SPECIFICATION AND ORDER

J A T W

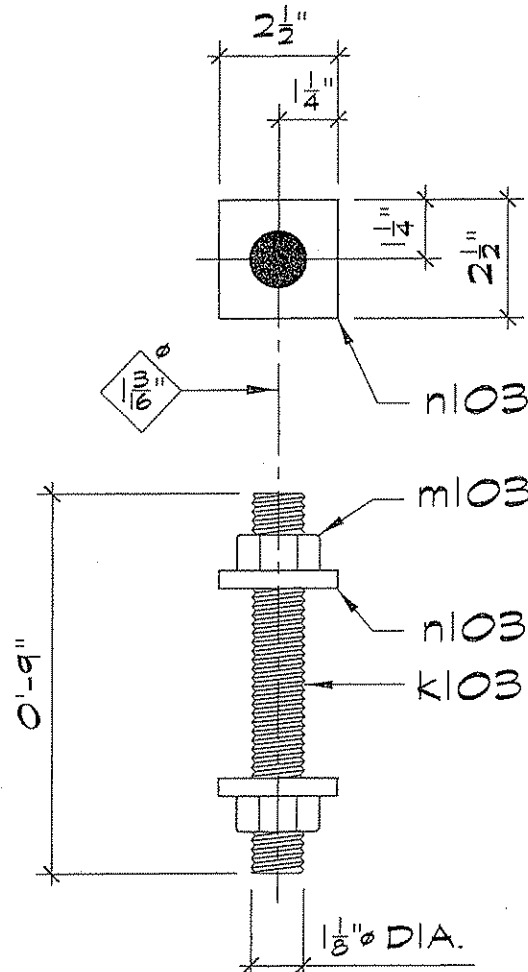
INSPECTION MANAGER

SUPERVISOR

HISTEEL CO., LTD

A4(210

QTY	DESCRIPTION	LENGTH		MARK	●	MAT GR	REMARKS	CODE	MO
		FT.	INCHES						
112	ANCHOR BOLT ASSY		-	D103	●				
112	1 1/8"Ø A193 ROD	0	9	K103		10	ALL THREAD ROD GR BT		
224	1 1/8"Ø NUT			m103		45	A194-2H		
224	FL 3/8"x2 1/2	0	2 1/2"	n103		2	A572-50	P H	



225082

DC
3/12/09

PURCHASE LENGTH : _____

PO # 98903
Power Fastener

☒ APPROVED FOR PURCHASING
☐ FOR APPROVAL PRICING ONLY

MTO NO. :

REF. :

NO.	DATE	REVISION	BY	HOLES: AS NOTED	STOCKTON ☒
B	03/02/09	REVISED FOR FABRICATION	AEU		SAN BERNARDINO ☐
A	02/20/09	REVISED QUANTITY, ADDED GRADE	AEU	PAINT: NONE	

Herrick

SKETCH SHEET

ANCHOR BOLT BUYOUT DETAIL
UNIVERSITY OF CALIFORNIA at BERKELEY
BERKELEY, CA.

DRAWN AEU JOB NO. 9890
CHECKED RA SHEET BO-103
DATE 02/03/09
SHOP DATE : 1/13/09 LOAD NO. : _____ SHOP ISSUED : _____

Certificate of Inspection

POWER FASTENERS, INC. ISO 9001-2000 Reg# A1366US Phone: 323-232-4362

PO BOX 512056
LOS ANGELES, CA 90051
Fax: 323-232-4367

DESCRIPTION	1-1/8"-7	SPECIFICATION: ASTM A193-04c B7
	All Thread Rod	PART # CUSTOM
LOT#	40239	

PHYSICAL ANALYSIS

SAMPLE SIZE:	2 pcs	TEMPERING TEMP.	1310 Deg. F.	TESTING STD.	F606-98 / F1470
TENSILE	REQUIREMENT: 125,000	Psi	ACTUAL: 146	Psi	HARDNESS REQUIREMENT: 35 HRC max ACTUAL: 28 - 31 HRC
YIELD 2% Off.	REQUIREMENT: 81,000	Psi	ACTUAL: 133	Psi	
ELONGATION 2"	REQUIREMENT: 14	%	ACTUAL: 22	%	RED AREA REQUIREMENT: 50% ACTUAL: 63%

DIMENSIONAL ANALYSIS

DIMENSIONAL	SAMPLE SIZE:	8 pcs	PASS
VISUAL:	SAMPLE SIZE:	28 pcs	PASS

CHEMICAL ANALYSIS

MATERIAL TYPE:	HEAT # 225082										
C (.35-.53)	Mn (NR)	P .035 Max.	S .040 Max.	Si	Cu	Ni	Cr	Mo	V	Nb	Al
0.41	0.86	0.01	0.021	0.23	0.21	0.09	0.85	0.21	0.024	0	0

Test values show represent the average of all tests taken.
We hereby certify that the data reflects the information as provided by the material supplier and/or our testing laboratory(s).
Mechanical testing performed using machine sample testing per ASTM F606.

DATE:	3/10/2009	Inquiries can be directed to :	QUALITY ASSURANCE REPRESENTATIVE
PO #	98903		POWER FASTENERS <i>[Signature]</i>
			(see contact information above)

Certificate of Inspection

POWER FASTENERS, INC. ISO 9001-2000 Reg# A1366US

Phone: 323-232-4362

PO BOX 512056

LOS ANGELES, CA 90051

Fax: 323-232-4367

DESCRIPTION	1-1/8"-7							SPECIFICATION:	ASTM A563-04a Grade DH
	Heavy Hex Full Nut							PART #	HH112CDH
LOT#	20082-5							LOT SIZE:	12,800

PHYSICAL ANALYSIS

SAMPLE SIZE:	20	TEMPERING TEMP.	900 Deg. F. Min.	TESTING STD.	ASTM 563-04a-DH / F606
PROOF LOAD	REQUIREMENT:	133,525 LBS.	ACTUAL:	PASS	OK

PASS

HARDNESS	REQUIREMENT:	24-38	HRC	ACTUAL:	26 - 30	HRC	PASS
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PASS

DIMENSIONAL ANALYSIS

DIMENSIONAL:	SAMPLE SIZE:	20	REQUIREMENT:	ANSI B 18.2.2	PASS
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PASS

APPEARANCE:	SAMPLE SIZE:	20	PASS
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PASS

CHEMICAL ANALYSIS

MATERIAL GRADE: SAE C1045									
C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V
0.45	0.64	0.023	0.016	0.22	0.01	0.01	0.01		

Marks: POW 2H DH

DATE: 1/15/2008

PO#: 98903

QUALITY ASSURANCE REPRESENTATIVE





CMC Steel Texas
PO Box 911
Seguin, TX 78155
(830) 372-8200

CERTIFIED MILL TEST REPORT

For Additional copies call (830) 372-8485

We hereby certify that the test results presented here
are accurate and conform to the reported grade
Daniel J. Schacht
Daniel J. Schacht
Quality Assurance Manager

HEAT NO: 254334	S O L D T O	POWER FASTENERS INC P O BOX 2056 LOS ANGELES, CA 90051-	S H I P T O	POWER FASTENERS PICK UP AT THE MILL SEGUIN, TX 78155-	SHIP#: 101923/57										
SECTION: F 3x3/8x20"0"					BOL#: 446134										
GRADE: F 76x9.5x6.096					INV#: 18988-2										
WEIGHT/PCS: ASTM A572-03a GRADE 50 TYPE 1					CUST PO#: 18988-2										
					CUST PN#:										
PROPERTIES															
CHEMICAL ANALYSIS		MECHANICAL													
%		TEST 1		TEST 2											
		IMPERIAL	METRIC	IMPERIAL	METRIC										
C	0.13	56.7KSI	390.9MPA												
MN	0.76	76.6KSI	528.2MPA												
P	0.012	32%	32%												
S	0.023	8INS	203MM												
SI	0.18														
CU	0.33														
CR	0.15														
NI	0.13														
MO	0.039														
CB	0.013														
V	0.000														
SN	0.012														
B	0.0003														
TI	0.001														
JOMINY RESULTS - Rockwell C hardness at 1/16th inch increments		INCLUSION RATING													
		GRAIN SIZE		METHOD											
				TYPE											
		RESULT		SIZE											
1	2	3	4	5	6	7	8	9	10	11	12	A	B	C	D
												T	H	T	H
13	14	15	16	18	20	22	24	26	28	30	32				

100% MELTED AND MANUFACTURED IN THE USA AND FREE OF MERCURY CONTAMINATION IN THE PROCESS

REMARKS

	FIELD BOLTS				REMARKS	WEIGHT	
	QUANTITY	DESCRIPTION	LENGTH				
			FT.	IN.			
2	31	7/8 A490 bolts	0	3	Cordova Rd # 98902	34	
2	19	7/8 A490 bolts	0	2 3/4		19	
3	13	7/8 A490 bolts	0	2 1/2		12	
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14	69	7/8 HVY HEX NUTS					
15							
16	69	7/8 HVY WASHERS				5	
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
NO.	DATE	REVISION	MADE BY	NO.	DATE	REVISION	MADE BY

DC
GV
3/12/09

Herrick

MISCELLANEOUS MATERIALS SUMMARY

STOCKTON ☐

SAN BERNARDINO ☐

Field Bolts

MADE BY: AEU

JOB NO.: 9890

UC Berkeley Hybrid Bracings

CHKD BY:

SHEET: MS-1

Berkeley Ca.

DATE: 3/3/2009

WT: 70

SHOP DATE: 3/11/09

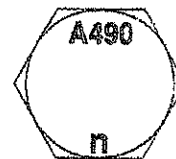
LOAD NO.:

SHOP ISSUE:

FASTENER DIVISION

CUSTOMER NO/NAME

143 CORDOVA BOLT INC
TEST REPORT SERIAL# FB312231
TEST REPORT ISSUE DATE 6/20/08
DATE SHIPPED 9/02/08
NAME OF LAB SAMPLER: STEVEN A. JENNINGS, LAB TECHNICIAN
NUCOR PART NO QUANTITY LOT NO. DESCRIPTION
165440 1500 244408A 7/8-9 X 3 A490 HVY HX
MANUFACTURE DATE 6/03/08 STRUC SCREW PLAIN



--CHEMISTRY

MATERIAL GRADE -4135MLV
MATERIAL HEAT
NUMBER NUMBER
RM024413 NU 844781
MIN .30
MAX .48
CHEMISTRY COMPOSITION (WT% HEAT ANALYSIS) BY MATERIAL SUPPLIER
C MN P S SI CR MO V
.34 .86 .011 .019 .25 .94 .16 .020
NUCOR STEEL - NEBRASKA
A2LA NO: 780.01 EXP: 2008-11-30
FOR CHEMICAL TESTING

--MECHANICAL PROPERTIES IN ACCORDANCE WITH ASTM A490-08a

SURFACE HARDNESS (R30N)	CORE HARDNESS (RC)	PROOF LOAD 55450 LBS	TENSILE STRENGTH 10 DEG-WEDGE (LBS)	STRESS (PSI)
N/A	33.3	PASS	74870	162056
N/A	33.5	PASS	75240	162857
N/A	33.0	PASS	73740	159610
N/A	33.4			
AVERAGE VALUES FROM TESTS		PRODUCTION LOT SIZE	5300 PCS	
33.3		74617	161508	

--VISUAL INSPECTION IN ACCORDANCE WITH ASTM F788

--WET MAGNETIC PARTICLE INSPECTION IN ACCORDANCE WITH ASTM A490-08a

4 PCS. SAMPLED LOT PASSED

--MICROHARDNESS TEST RESULT IN ACCORDANCE WITH SAE J121-99(HKN)

POSITION 1. 365 2. 346 3. 361
CARBURIZATION/DECARBURIZATION TEST IN ACCORDANCE WITH A490-08a LOT PASSED
HEAT TREATMENT - AUSTENITIZED, OIL QUENCHED & TEMPERED (MIN 800 DEG F)

--DIMENSIONS PER ASME B18.2.6-2003

CHARACTERISTIC	#SAMPLES TESTED	MINIMUM	MAXIMUM
Width Across Corners	8	1.6180	1.6290
Grip Length	8	1.3700	1.4000
Head Height	8	0.5600	0.5620
Threads	8	PASS	PASS

9890
98902

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. NO HEATS TO WHICH BISMUTH, SELENIUM, TELLURIUM, OR LEAD WAS INTENTIONALLY ADDED HAVE BEEN USED TO PRODUCE THE BOLTS. 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.



NUCOR FASTENER
A DIVISION OF NUCOR CORPORATION

James B. Galamas
JAMES GALAMAS
TECHNICAL SERVICES MANAGER

MECHANICAL FASTENER
CERTIFICATE NO. A2LA 139-01
EXPIRATION DATE 12/31/09

NUCORLOT NO.
168404APost Office Box 6100
Saint Joe, Indiana 46785
Telephone 260/337-1600**FASTENER DIVISION****CUSTOMER NO/NAME**

143 CORDOVA BOLT INC

NUCOR ORDER # 480867

TEST REPORT SERIAL# FB214140

CUST PART #

TEST REPORT ISSUE DATE 8/22/03

DATE SHIPPED 11/24/03

CUSTOMER P.O. # 014592

NAME OF LAB SAMPLER: DARREN HARTZ, LAB TECHNICIAN

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

NUCOR PART NO QUANTITY LOT NO. DESCRIPTION

168430 2925 168404A 7/8-9 X 2 3/4 A490 HVY HX

MANUFACTURE DATE 7/29/03 STRUC SCREW PLAIN

**---CHEMISTRY**

MATERIAL GRADE -4135MOD

MATERIAL	HEAT	**CHEMISTRY COMPOSITION (WT% HEAT ANALYSIS) BY MATERIAL										SUPPLIER
NUMBER	NUMBER	C	MN	P	S	SI	CR	MO	V			
RM020333	IN 391612	.34	.83	.008	.009	.23	.95	.16	.011			
	MIN	.30										
	MAX	.48		.040	.040							

 INLAND STEEL
 P. O. BOX 360518M
 PITTSBURGH, PA 15251
 AZLA NO: 111.01 EXP: 2004-12-31
 FOR CHEMICAL TESTING
---MECHANICAL PROPERTIES IN ACCORDANCE WITH ASTM A490-02

SURFACE	CORE	PROOF LOAD	TENSILE STRENGTH
HARDNESS	HARDNESS	55450 LBS	10 DEG-WEDGE
(R30N)	(RC)		(LBS) STRESS (PSI)
N/A	34.9	PASS	76502 165589
N/A	35.3	PASS	76455 165487
N/A	34.9	PASS	75924 164338
N/A	35.0		

 AVERAGE VALUES FROM TESTS PRODUCTION LOT SIZE 10000 PCS
 35.0 76294 165138
---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. 376 2. 379 3. 387
 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	1.6190	1.9300
Grip Length	8	1.1100	1.1500
Head Height	8	0.5440	0.5460
Threads	8	PASS	PASS

 9890
 98902

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.


 NUCOR FASTENER
 A DIVISION OF NUCOR CORPORATION

Morton Schaffer

 MORTON SCHAFFER
 QUALITY ASSURANCE SUPERVISOR

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

FASTENER DIVISION

CUSTOMER NO/NAME

143 CORDOVA BOLT INC
TEST REPORT SERIAL# FB310961
TEST REPORT ISSUE DATE 6/13/08
DATE SHIPPED 9/17/08
NAME OF LAB SAMPLER: Deann Moreno, LAB TECHNICIAN
CUSTOMER P.O. # 025086
NUCOR PART NO QUANTITY LOT NO. DESCRIPTION
165420 1400 243371A 7/8-9 X 2 1/2 A490 HVY HX
MANUFACTURE DATE 6/10/08 STRUC SCREW PLAIN



--CHEMISTRY

MATERIAL HEAT MATERIAL GRADE -4135MLV
NUMBER NUMBER **CHEMISTRY COMPOSITION (WT% HEAT ANALYSIS) BY MATERIAL SUPPLIER
RM024413 NU 844781 C .34 MN .86 P .011 S .019 SI .25 CR .94 MO .16 V .020 NUCOR STEEL - NEBRASKA
MIN .30 A2LA NO: 780.01 EXP: 2008-11-30
MAX .48 .040 .040 FOR CHEMICAL TESTING

--MECHANICAL PROPERTIES IN ACCORDANCE WITH ASTM A490-08a

SURFACE	CORE	PROOF LOAD	TENSILE STRENGTH
HARDNESS	HARDNESS	55450 LBS	6 DEG-WEDGE
(R30N)	(RC)		(LBS) STRESS (PSI)
N/A	34.9	PASS	76020 164545
N/A	34.4	PASS	75760 163983
N/A	35.4	PASS	76010 164524
N/A	35.1		
AVERAGE VALUES FROM TESTS	35.0	PRODUCTION LOT SIZE	32300 PCS
		75930	164351

--VISUAL INSPECTION IN ACCORDANCE WITH ASTM F788

--WET MAGNETIC PARTICLE INSPECTION IN ACCORDANCE WITH ASTM A490-08a 4 PCS. SAMPLED LOT PASSED

--MICROHARDNESS TEST RESULT IN ACCORDANCE WITH SAE J121-99(HKN)

POSITION 1. 361 2. 376 3. 367
CARBURIZATION/DECARBURIZATION TEST IN ACCORDANCE WITH A490-08a LOT PASSED
HEAT TREATMENT - AUSTENITIZED, OIL QUENCHED & TEMPERED (MIN 800 DEG F)

--DIMENSIONS PER ASME B18.2.6-2003

CHARACTERISTIC	#SAMPLES TESTED	MINIMUM	MAXIMUM
Width Across Corners	8	1.6170	1.6230
Grip Length	8	0.8580	0.8730
Head Height	8	0.5560	0.5630
Threads	8	PASS	PASS

9890
98902

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. NO HEATS TO WHICH BISMUTH, SELENIUM, TELLURIUM, OR LEAD WAS INTENTIONALLY ADDED HAVE BEEN USED TO PRODUCE THE BOLTS. 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.

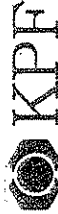


MECHANICAL FASTENER
CERTIFICATE NO. A2LA 139-01
EXPIRATION DATE 12/31/09

NUCOR FASTENER
A DIVISION OF NUCOR CORPORATION

James B. Neal
JAMES NEAL
TECHNICAL SERVICES MANAGER

INSPECTION CERTIFICATE



FACTORY : 601 YONGTAN-DONG, CHUNGJU-CITY,
CHUNGCHONGBUK-DO, KOREA 380-250
TEL : (043) 849 - 1114
FAX : (043) 849 - 1234

FIELD OF TESTING : MECHANICAL TESTING
LAB. ID. : 111983
CERT. NO. : 882-01

STANDARD
OF CERTIFIED : ISO/TS 16949, ISO 9001, ISO 14001
CERT. NO. : TS-01899, AC-01899, EAC-01899



PAGE 1/2

2. Macroetch Meet

Heat No.	C x100	Si x100	Mn x100	P x1000	S x1000	Cr x100	Mo x100	Ni x100	B x10000	Cu x100	Ti x100	V x100	Al x1000
322456	43	21	70	18	15	9	1	6	22				
Spec.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
	40		40	100	40	50							

1. Chemical Composition (%)

Division	Surface Condition	Random Condition	Center Segregation	Spec. of Test Method
Spec.	S2	R2	C2	ASTM E381 -
Results	S2	R1	C2	
Tested By	K. R. LEE			

3. Mechanical Properties

Division	Hardness		Specimen Tensile			Proof Load		Tensile Load	Sample Nut Hardness 540°C/24hr	Impact Test		Bending Test	Bolt Retemping Hardness	Tap Wrench Fit Test	Decarburization Test By Hardness
	Surface	Core	Yield Strength	Tensile Strength	Elongation	Reduction of Area	Load	Elongation		Individual	Average				
Unit	Min.								n = 1						
	Max.								HRC						
	Min.								89						
	Max.								HRC						
	1						6000		HRC 29						
	2						6000		29						
	3						6000								
	4						6000								
	5						6000								
	6						***								
Results															
9890 98902															
Tested By	G. Y. HWANG														
Spec. of Test Method	ASTM A370 -														

This is to certify that the above results are true and correct in every details

[Signature]
IN-SUB CHOE
Chief of Quality Management Dept.

KPF



TECHNICAL STAMPING, INC.

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

MATERIAL CERTIFICATION

CUSTOMER NAME			CUSTOMER ORDER NUMBER			DATE		
Cordova Bolt Inc.			24839			8/25/08		
PART NUMBER		CUSTOMER LOT NO.		LOT NUMBER		QUANTITY		
7/8" F436		87NWD3		0708-150		75,000		
STEEL GRADE	HEAT	C	MN	P	S	SI	AL	REVISION
SAE 1050	2143035	.53	.80	.007	.002	.051	.058	ASTM F-436-04
SPECIFICATION		ACTUAL				GAUGE		
O.D - 1.719 - 1.781		1.752 - 1.755				CALIPER		
I.D - .938 - .970		.954 - .957				CALIPER, PIN GAUGE		
THICKNESS- .136 - .177		0.14				MICROMETER		
FLAT- Max .010		.004				CALIPER		
HEAT TREAT - 38 - 45 HRC		42						
PLATING-		N / A						
OTHER		N / A						

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

9890
98902

AUTHORIZED SIGNATURE

CERTIFIED ISO 9001:2000

	FIELD BOLTS				REMARKS <i>Cordova PO # 98902</i>	WEIGHT	
	QUANTITY	DESCRIPTION	LENGTH				
			FT.	IN.			
2	4	3/4 A307 Bolts	0	6 1/2		5	
2	4	3/4 A307 Bolts	0	7 1/2		5	
3							
4							
5	8	3/4 A307 Hex Nuts					
6	8	3/4 A307 Washers				1	
7							
8	0						
9	0						
10	0						
11	0						
12	0						
13	0						
14	0						
15	0						
16	0						
17	0						
18	0						
19	0						
20	0						
21	0						
22	0						
23	0						
24	0						
25	0						
26	0						
27	0						
28	0						
29	0						
30	0				DOMESTIC ONLY		
NO.	DATE	REVISION	MADE BY	NO.	DATE	REVISION	MADE BY

Herrick

MISCELLANEOUS MATERIALS SUMMARY

 STOCKTON ☐

 SAN BERNARDINO ☐

Field Bolts

MADE BY: AEU

JOB NO.: 9890

U C Berkeley Hybrid Bracings

CHKD BY:

SHEET: MS-2

Berkeley, CA

DATE: 3/3/2009

WT: 11

SHOP DATE: 3/11/09

LOAD NO.:

SHOP ISSUE:



Cordova Bolt, Inc.

5601 DOLLY AVENUE
BUENA PARK, CA 90621
(714) 739-7500

CERTIFICATE OF CONFORMANCE

Miscellaneous Materials

We certify, upon examination of the appropriate documents, records & specifications, that the material listed below conforms to applicable industry standards and that the manufacturing procedures for this material includes the required testing. Cordova Bolt, Inc. takes no part in the fabrication of this product and disclaims any responsibility for functional defects caused by the manufacturing process. Therefore, Cordova Bolt, Inc. expressly limits its responsibility to the replacement of defective parts.

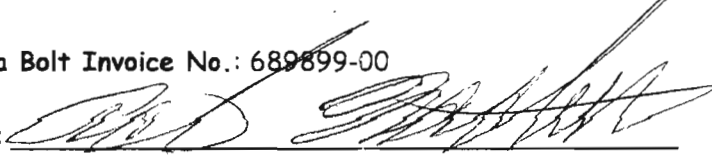
Quantity	Description
4	3/4-10 X 6 1/2 NC A307A HEX MACH BOLT
4	3/4-10 X 7 1/2 NC A307A HEX MACH BOLT
8	3/4-10 HEX FINISH NUT
8	3/4-10 HEX FINISH NUT

Date: MARCH 6, 2009

Customer: THE HERRICK CORPORATION
PO BOX 8429
STOCKTON, CA 95208-0429

Customer Purchase Order No.: 98902

Cordova Bolt Invoice No.: 689899-00

Signed: 
Quality Assurance Representative

DATE	4/09/08
INVOICE NO.	220177
BILL OF LADING	902692
CUSTOMER NO.	7873
CUSTOMER P.O.	\$ 24502-2450

NUCOR-YAMATO STEEL CO.

P.O. BOX 1228 • BLYTHEVILLE, AR 72316

S
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STOCKTON STEEL C/O
KEEP ON TRUCKING BNSF R/R
STOCKTON, CA FOR TRK
DEL TO STOCKTON, CA 95212

CERTIFIED MILL TEST REPORT

100% MELTED AND MANUFACTURED IN U.S.A.
All shapes produced by Nucor-Yamato Steel are cast
and rolled to a fully killed and fine grain practice.

S
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ASTM A992/A992M-06a A572/A572M GR50-06
ASTM A709/A709M-07 GR50 (345)
ASTM A709/A709M-07 GR50S (345S)
ASTM A6/A6M-07

S
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HERRICK CORPORATION

PO BOX 8429
STOCKTON, CA

95208

ITEM #	ITEM DESCRIPTION	QTY	HEAT #	YIELD TO TENSILE RATIO	MECHANICAL PROPERTIES					CHEMICAL PROPERTIES																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
					YIELD STRENGTH	TENSILE STRENGTH	ELONG	CHARPY IMPACT		C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Cb	CE																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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					MPa	MPa	%	* F	FT-LBS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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BERKELEY
HYBRID
9890

Pure - C • Si • Mn • Cu • Ni • Cr • Mo • V • S B Approx. 0005
30 20 20 90 20 15 10

CARBON EQUIVALENT: CE = CE(IIW) = C + Mn/6 + (Cr+Mo+V)/5 + (Ni+Cu)/15

Corrosion Index: CI = 26.0 (%Cu) + 3.88 (%Ni) + 1.20 (%Cr) + 1.48 (%S) + 17.28 (%P) - 7.29 (%Cu)(%Ni) - 8.10 (%Ni)(%P) - 33.38 (%Cu)²

ELONGATION BASED ON 8.00 INCH GAUGE LENGTH

I hereby certify that the contents of this report are accurate and correct. All test results and operations performed by this material manufacturer are in compliance with the requirements of the material specifications listed in the Specifications Block above.

Gay Linnell

QUALITY ASSURANCE

CUSTOMER COPY

STATE OF ARKANSAS COUNTY OF MISSISSIPPI
SWORN TO AND SUBSCRIBED BEFORE ME

9

Day of

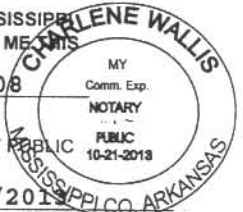
04/08

Charlene Wallis

NOTARY PUBLIC

MY COMMISSION EXPIRES

10/21/2013





BULL MOOSE TUBE ELKHART FACILITY
CERTIFICATION OF TESTS

04/29/08
Page 4 of 7

1819 Clarkson Rd.
Chesterfield, Missouri 63017

BILL TO Herrick Corporation
P.O. Box 8429
Stockton CA 95208

SHIP TO HERRICK/STOCKTON STEEL
BNSF C/O KEEP ON TRUCKING
CCT / PORT OF STOCKTON, CA.
BNSF DIRECT TRACK #9968
STOCKTON CA

B/L Number 165180

Ship Via

TTPX_804273

6" SQ X 0.500 HR X 42'
152.4 mm
ASTM A500-03 Grade B
Ticket # = 59246072
Heat # = 11974M08
C MN P S AL SI CB CU CR NI VA YLD psi TSN psi ELN %
.050 .730 .010 .006 .039 .011 .029 .030 .030 .020 .001 59850 68375 40

Order # 245951
Purchase Order # 24111
Item # 115875 3840

6" SQ X 0.375 HR X 35'
152.4 mm
ASTM A500-03 Grade B
Ticket # = 59246186
Heat # = 11747M08
C MN P S AL SI CB CU CR NI VA YLD psi TSN psi ELN %
.060 .790 .013 .008 .032 .015 .032 .020 .030 .010 .002 64330 73501 34

Order # 245951
Purchase Order # 24111
Item # 107858 3840

6" SQ X 0.375 HR X 35'
152.4 mm
ASTM A500-03 Grade B
Ticket # = 59246191
Heat # = L1084
C MN P S AL SI CB CU CR NI VA YLD psi TSN psi ELN %
.060 .630 .009 .008 .027 .020 .024 .170 .070 .080 0.000 58710 69163 37

Order # 245951
Purchase Order # 24111
Item # 107858 3840

6" SQ X 0.250 HR X 34'
152.4 mm
ASTM A500-03 Grade B
Ticket # = 59243265
Heat # = L1069
C MN P S AL SI CB CU CR NI VA YLD psi TSN psi ELN %
.060 .770 .011 .012 .024 .030 .023 .170 .090 .070 .003 60960 72201 35

Order # 245951
Purchase Order # 24111
Item # 101876 3840

Quality Manager: *Richard Long*

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



BULL MOOSE TUBE ELKHART FACILITY
CERTIFICATION OF TESTS

04/29/08
Page 7 of 7

1819 Clarkson Rd.
Chesterfield, Missouri 63017

BILL TO Herrick Corporation
P.O. Box 8429
Stockton CA 95208

SHIP TO HERRICK/STOCKTON STEEL
BNSF C/O KEEP ON TRUCKING
CCT / PORT OF STOCKTON, CA.
BNSF DIRECT TRACK #9968
STOCKTON CA

B/L Number 165180

Ship Via

TTPX_804273

5" SQ X 0.312 HR X 38'								Order #		245962			
127.0 mm								Purchase Order #		24713			
ASTM A500-03 Grade B								Item #		111328 3200			
Ticket # = 59244860								Heat # = 23021M08		P			
C	MN	P	S	AL	SI	CB	CU	CR	NI	VA	YLD psi	TSN psi	ELN %
.060	.780	.015	.009	.034	.011	.033	.040	.040	.020	.002	61970	72264	35
5" SQ X 0.312 HR X 35'								Order #		245962			
127.0 mm								Purchase Order #		24713			
ASTM A500-03 Grade B								Item #		102245 3200			
Ticket # = 59244864								Heat # = 23021M08		P			
C	MN	P	S	AL	SI	CB	CU	CR	NI	VA	YLD psi	TSN psi	ELN %
.060	.780	.015	.009	.034	.011	.033	.040	.040	.020	.002	61970	72264	35

Quality Manager:

Richard Long

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

DATE	3/21/07
INVOICE NO.	125455
BILL OF LADING	837798
CUSTOMER NO.	7950
CUSTOMER P.O.	\$ 22305-2230

NUCOR-YAMATO STEEL CO.

P.O. BOX 1228 • BLYTHEVILLE, AR 72316

S
H
I
P
T
O

SAN BERNARDINO STEEL
C/O KEEP ON TRUCKING
RANCHO CUCAMONGA, CA FOR TRK DEL TO
SAN BERNARDINO, CA 92235

CERTIFIED MILL TEST REPORT

100% MELTED AND MANUFACTURED IN U.S.A

All shapes produced by Nucor-Yamato Steel are cast and rolled to a fully killed and fine grain practice.

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ASTM A992/A992M-06a A572/A572M GR50
ASTM A709/A709M-03a GR50 (345)
ASTM A709/A709M-03a GR50S (345S)
ASTM A6/A6M-05a

S
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HERRICK CORPORATION
PO BOX 9125
PLEASANTON, CA 94566

ITEM #	ITEM DESCRIPTION	QTY	HEAT #	YIELD TO TENSILE RATIO	MECHANICAL PROPERTIES						CHEMICAL PROPERTIES												CE
					YIELD STRENGTH	TENSILE STRENGTH	ELONG	CHARPY IMPACT		C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Cb			
								TEMP	IMPACT ENERGY														
					PSI	PSI	%	° F	FT-LBS														
				MPa	MPa	%	° C	JOULES									Sn	Pcm		CI			
1	W08 - 24.0	6	292513	.77	57000	74000	25																
	51'			.76	56000	74000	23																
	W200 x 35.9				393	510	25																
	15.545 M				386	510	23																
2	W08 - 28.0	6	291731	.74	54000	73000	25																
	50'			.74	55000	74000	23																
	W200 x 41.7				372	503	25																
	15.240 M				379	510	23																
3	W08 - 28.0	4	291733	.74	56000	76000	22																
	50'			.74	56000	76000	23																
	W200 x 41.7				386	524	22																
	15.240 M				386	524	23																
MTO 4940																							

MTD
4940

FORMULA: $CE = \frac{C}{100} + \frac{Mn}{1500} + \frac{Cu}{1500} + \frac{Ni}{1000} + \frac{Mo}{1000} + \frac{V}{1000} + \frac{Nb}{1000} + \frac{Ti}{1000} + \frac{B}{1000}$ CARBON EQUIVALENT: $CE = CE(II) = C + Mn/6 + (Cr+Mo+V)/5 + (Ni+Cu)/15$ Corrosion Index: $CI = 0.01(\%Cu) + 0.005(\%Ni) + 0.005(\%Cr) + 0.005(\%S) + 0.005(\%P) + 0.005(\%Cu) + 0.005(\%Ni) + 0.005(\%Cr) + 0.005(\%S) + 0.005(\%P)$

ELONGATION BASED ON 8.00 INCH GAUGE LENGTH

I hereby certify that the contents of this report are accurate and correct. All test results and operations performed by this material manufacturer are in compliance with the requirements of the material specifications, and when designated by the purchaser, meet the applicable specifications.

Gay Linnell

QUALITY ASSURANCE

CUSTOMER COPY

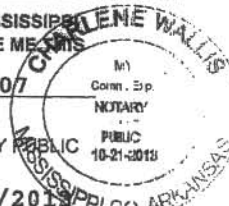
STATE OF ARKANSAS COUNTY OF MISSISSIPPI
SWORN TO AND SUBSCRIBED BEFORE ME THIS

21 Day of 03/07

Charlene Wallis

NOTARY PUBLIC

MY COMMISSION EXPIRES 10/21/2013



Q R U S
MTO
4940

State of Tennessee

MAANSHAN IRON AND STEEL COMPANY LIMITED

COMMODITY: HOT ROLLED STEEL WIDE FLANGE BEAMS
SPECIFICATION: W8, W10 AND W12 ACCORDING TO ASTM A992
W21 AND W18 ACCORDING TO ASTM A882 AND A572 GR 50

MILL'S TEST CERTIFICATE
W24,
DATE: 2007-10-10
CERTIFICATE NO.: 20070994-9

Size	Heat Number	Pieces	Weight □MT□	Chemical Analysis										Mechanical Properties				
				C	Si	Mn	P	S	Cr	Ni	Cu	V	Mo	Nb	Ceq	Yield Strength R _e (N/mm ²)	Tensile Strength R _m (N/mm ²)	Elongation A ₅₀₀ %
24" x 76" x 45"	107080640	9	13.950	0.17	0.21	1.26	0.019	0.015	0.020	0.010	0.010	0.010	0.010	0.020	0.360	395	510	28.0
24" x 76" x 45"	107080641	3	4.650	0.17	0.21	1.19	0.018	0.017	0.010	0.010	0.010	0.010	0.010	0.020	0.360	400	520	27.0
24" x 76" x 50"	107080636	14	24.108	0.15	0.21	1.23	0.022	0.017	0.030	0.010	0.020	0.010	0.010	0.020	0.370	385	525	27.5
24" x 76" x 50"	107080637	2	3.444	0.18	0.25	1.22	0.018	0.018	0.010	0.010	0.010	0.010	0.010	0.020	0.360	415	520	24.0
24" x 76" x 55"	107080642	4	7.576	0.16	0.25	1.20	0.024	0.018	0.020	0.010	0.010	0.010	0.010	0.020	0.370	415	530	28.5
24" x 76" x 55"	107080643	4	7.576	0.16	0.24	1.23	0.025	0.016	0.020	0.010	0.010	0.010	0.010	0.020	0.370	390	415	28.0
24" x 76" x 60"	107080635	18	37.208	0.15	0.21	1.28	0.023	0.017	0.030	0.010	0.020	0.010	0.010	0.020	0.380	385	405	26.5
24" x 84" x 40"	107080618	12	18.288	0.15	0.23	1.20	0.017	0.015	0.020	0.010	0.010	0.010	0.010	0.020	0.360	405	525	27.0
24" x 84" x 45"	107080616	11	18.865	0.16	0.22	1.23	0.017	0.025	0.010	0.010	0.010	0.010	0.010	0.020	0.370	395	400	28.5
24" x 84" x 50"	107080613	8	15.240	0.16	0.20	1.22	0.015	0.016	0.020	0.010	0.010	0.010	0.010	0.020	0.370	400	510	28.5
24" x 84" x 55"	107080630	9	18.864	0.16	0.20	1.26	0.029	0.031	0.010	0.010	0.010	0.010	0.010	0.020	0.380	385	390	27.0
24" x 84" x 60"	107080612	6	13.716	0.16	0.20	1.18	0.014	0.022	0.010	0.010	0.010	0.010	0.010	0.020	0.360	400	520	28.5
24" x 94" x 35"	107080602	1	1.494	0.15	0.21	1.18	0.015	0.024	0.020	0.010	0.010	0.010	0.010	0.020	0.360	400	410	27.0
24" x 94" x 35"	107080603	8	11.952	0.16	0.22	1.21	0.016	0.020	0.010	0.010	0.010	0.010	0.010	0.020	0.370	405	530	31.5
24" x 94" x 40"	107080598	8	13.658	0.16	0.22	1.24	0.016	0.022	0.030	0.010	0.020	0.010	0.010	0.020	0.360	405	530	28.0
24" x 94" x 45"	107080602	12	23.040	0.15	0.21	1.18	0.015	0.024	0.020	0.010	0.010	0.010	0.010	0.020	0.360	400	410	27.0
24" x 94" x 50"	107080685	5	10.670	0.16	0.22	1.19	0.022	0.018	0.020	0.010	0.020	0.010	0.030	0.010	0.360	430	540	27.0
24" x 94" x 50"	107080686	5	10.670	0.17	0.24	1.17	0.020	0.018	0.010	0.010	0.020	0.010	0.020	0.010	0.370	410	540	26.0
24" x 94" x 55"	107080591	3	7.041	0.17	0.23	1.20	0.021	0.016	0.030	0.010	0.010	0.010	0.010	0.020	0.380	400	395	25.0
24" x 94" x 55"	107080610	1	2.347	0.19	0.24	1.26	0.021	0.017	0.010	0.010	0.010	0.010	0.010	0.020	0.410	395	510	27.0
24" x 94" x 55"	107080611	5	11.735	0.15	0.23	1.21	0.018	0.020	0.020	0.010	0.010	0.010	0.010	0.020	0.360	385	395	28.0
24" x 94" x 60"	107080605	3	7.680	0.18	0.23	1.21	0.020	0.021	0.020	0.010	0.010	0.010	0.010	0.020	0.390	410	405	29.0
24" x 94" x 60"	107080608	3	7.680	0.17	0.21	1.17	0.014	0.016	0.020	0.010	0.010	0.010	0.010	0.020	0.370	385	400	29.5
24" x 94" x 60"	107080610	4	10.240	0.19	0.24	1.26	0.013	0.017	0.010	0.010	0.010	0.010	0.010	0.020	0.410	385	510	27.0
8" x 18" x 35"	207070954	66	18.744	0.17	0.24	1.30	0.023	0.016	0.020	0.010	0.010	0.024	0.010	0.020	0.400	435	575	30.0
8" x 18" x 40"	207071016	84	27.216	0.16	0.21	1.30	0.017	0.017	0.010	0.010	0.010	0.027	0.010	0.020	0.390	370	370	30.5
8" x 18" x 45"	207071000	16	5.940	0.16	0.24	1.22	0.013	0.024	0.020	0.010	0.010	0.024	0.010	0.020	0.390	430	565	31.0
8" x 18" x 50"	207070947	48	19.440	0.15	0.21	1.24	0.019	0.020	0.030	0.010	0.010	0.024	0.010	0.020	0.370	430	575	30.0
8" x 18" x 60"	207070964	42	20.412	0.16	0.24	1.26	0.022	0.024	0.020	0.010	0.010	0.025	0.010	0.020	0.380	365	540	34.0
8" x 21" x 40"	207080012	7	2.674	0.15	0.23	1.25	0.026	0.020	0.030	0.010	0.010	0.020	0.010	0.020	0.370	375	405	33.5
8" x 21" x 40"	207080013	9	3.438	0.16	0.24	1.22	0.022	0.019	0.020	0.010	0.010	0.020	0.010	0.020	0.370	370	405	31.0
8" x 21" x 50"	207071035	14	6.678	0.17	0.22	1.33	0.030	0.026	0.020	0.010	0.010	0.030	0.010	0.020	0.400	365	520	32.5
8" x 21" x 60"	207071030	7	4.004	0.15	0.26	1.26	0.019	0.019	0.040	0.010	0.010	0.026	0.010	0.020	0.380	360	370	31.0
8" x 21" x 60"	207071031	17	9.724	0.19	0.24	1.36	0.028	0.020	0.020	0.010	0.010	0.028	0.010	0.020	0.430	370	375	33.0
10" x 12" x 35"	207080008	1	0.191	0.16	0.21	1.11	0.023	0.016	0.030	0.020	0.020	0.017	0.010	0.020	0.360	390	400	37.0
10" x 12" x 35"	207080010	2	0.382	0.15	0.23	1.14	0.021	0.019	0.020	0.020	0.020	0.014	0.010	0.020	0.350	410	400	30.0
10" x 12" x 35"	207080011	1	0.191	0.15	0.20	1.13	0.025	0.018	0.020	0.010	0.030	0.019	0.010	0.020	0.350	410	425	28.0
10" x 12" x 35"	207080012	2	0.382	0.16	0.23	1.14	0.023	0.017	0.020	0.010	0.030	0.017	0.010	0.020	0.360	370	410	27.5
10" x 12" x 35"	207080013	1	0.191	0.16	0.23	1.13	0.021	0.017	0.020	0.010	0.020	0.015	0.010	0.020	0.360	400	425	28.5
10" x 12" x 35"	207080014	1	0.191	0.16	0.20	1.11	0.018	0.013	0.020	0.010	0.020	0.014	0.010	0.020	0.360	425	530	28.0

H N V E

San Bernardino Steel

Job #
PO # 23271



Украина
Ukraine

МАРИУПОЛЬСКИЙ МЕТАЛЛУРГИЧЕСКИЙ
КОМБИНАТ ИМЕНИ ИЛЬИЧА
ILYICH IRON & STEEL WORKS OF MARIUPOL

СЕРТИФИКАТ КАЧЕСТВА N
QUALITY CERTIFICATE No 22558

От Лист 1 Из 1
Date 11.07.2008 Sheet 1 Of 1
Листов
Sheets

87504, г. Мариуполь, ул. Левченко, 1. Телекс 115157 DEPO SU
Свидетельство о приемочных испытаниях
Inspection certificate

EN 10204-3.1

Комплект N 12EXP/001-07
Contract No UF700107317
Заказчик
Customer

Вароч N 66681354
RW-Car No
Наименование товара
Description of goods
Марка стали
Grade of steel

Спецификация N 317UF
Specification No
Лот N 4
Lot No

Gr.50 TYPE 2
Состояние поставки
Delivery condition
Маркировка
Marking

Горючекатаный лист
Hot Rolled Plate
Trade mark, Made in Ukraine, Grade of steel, Cast No,
Test No, Lot 4, Dimensions in, Houston, One colour stroke
red and one colour stroke green at both ends of the
plate.

Клеймо
Hard stamp

Позиция Item No	Плавка Cast No	Партия N Test No	Размеры, дюйм Dimensions, inch		Кол-во, шт. Number of pieces,	Теоретическая масса, тн Theoretical mass, tn
			Толщина Thickness	Длина Length		
284240	14857		1/2	96	240	10
284241	14855		3/4	96	240	2
284242	14856		1/2	96	240	23
284255	14862		1	96	240	4
						39
						65.204

Химический состав, % Chemical composition, %													
Плавка Cast No	C	Mn	Si	S	P	Cr	Ni	Cu	Ti	Al	As	Nb	Ca
284240	18	107	21	10	25	5	2	2	6	27	2	6	3
284241	18	97	20	18	18	7	2	3	6	33	3	8	3
284242	20	105	22	12	15	3	2	2	4	29	3	6	2
284255	20	106	22	17	18	4	1	2	4	45	2	6	3

Ларина N Test No	Номер изделия Product No	Размеры Dimensions		Направление Direction	Темп. испыт. Test temperature	Предел текучести Yield point	Предел прочности Tensile strength	Отн. удлинение Elongation	Отн. сужение Reduction of area	Тип надреза Notch type	Испытания на удар Impact tests				Катод Cathode	Среднее значение Average value	Бенд тест Bend test	Shear area
		Толщина/диаметр Thickness/diameter	Ширина Width			ReH	Rm	sin	z		Энергия удара Impact energy	Энергия удара Impact energy	Энергия удара Impact energy	Энергия удара Impact energy				
14857	13-1	12,7	40	T	+20	442	535	20	-	-	J	J	J	J	-	-	-	-
14857	14-1	12,7	40	T	+20	446	535	20	-	-	-	-	-	-	-	-	-	-
14855	1-1	19,05	40	T	+20	450	545	18	-	-	-	-	-	-	-	-	-	-
14855	2-1	19,05	40	T	+20	447	540	18	-	-	-	-	-	-	-	-	-	-
14856	7-1	12,7	40	T	+20	446	540	18,0	-	-	-	-	-	-	-	-	-	-
14856	8-1	12,7	40	T	+20	432	530	20,0	-	-	-	-	-	-	-	-	-	-
14862	1-1	25,4	40	T	+20	379	483	20	-	-	-	-	-	-	-	-	-	-
14862	2-1	25,4	40	T	+20	376	485	26	-	-	-	-	-	-	-	-	-	-

В начале полосы/strip start: E-концы полосы/strip end: L-продольное/Longitudinal;
T-поперечное/Transverse; d-диаметр/diameter

Примечание / Note

Поставка соответствует условиям заказа. Осмотр поверхности без замечаний. Размеры проката в пределах допусков. Delivery conforms to conditions of the order. Surface examination without remarks. Rolled product dimensions within the tolerance limit.
It is hereby certified that the quality of goods mentioned in this certificate is in conformity with the standards and specifications.
Указанный в настоящем сертификате товар соответствует по качеству действующим стандартам и техническим условиям.

Подпись
Signature
Печать эксперта
Receiving agent's stamp
Печать завода
Factory stamp

27000
20170412

Atlas Tube Canada ULC
200 Clark St.
Harrow, Ontario, Canada
N0R 1G0
Tel: 519-738-3541
Fax: 519-738-3537



Ref.B/L: 80349184
Date: 07.28.2009
Customer: 741

Sold to

Totten Tubes, Inc.
500 Danlee Street
AZUSA CA 91702-2341
USA

MATERIAL TEST REPORT

Shipped to

Totten Tubes, Inc.
500 Danlee Street
AZUSA CA 91702-2341
USA

Material: 5.000x500x42"0"0(7x1).

Sales order: 486470

Material No: R050005004200

Made in: Canada

Purchase Order: 42608

Heat No	C	Mn	P	S	Si	Al	Cu	Cb	Mo	Ni	Cr	V	Ti
T82669	0.190	0.740	0.007	0.006	0.017	0.059	0.020	0.004	0.003	0.010	0.020	0.001	0.001
Bundle No	Yield		Tensile		Eln.2in		Certification				CE: 0.32		
M100871850	065881 Psi		072580 Psi		33.1 %		ASTM A500-07 GRADE B&C						

Material Note:
Sales Or.Note:

Material: 6.625x500x21"0"0(2x1)PB

Sales order: 488857

Material No: R06625500

Made in: Canada

Purchase Order: 42532

Heat No	C	Mn	P	S	Si	Al	Cu	Cb	Mo	Ni	Cr	V	Ti
R83464	0.190	0.800	0.013	0.008	0.009	0.036	0.040	0.005	0.006	0.010	0.040	0.001	0.001
Bundle No	Yield		Tensile		Eln.2in		Certification				CE: 0.34		
0002167296	059650 Psi		071800 Psi		36.9 %		ASTM A500-07 GRADE B&C						

Material Note:
Sales Or.Note:

Material: 6.625x500x48"0"0(5x1).

Sales order: 488857

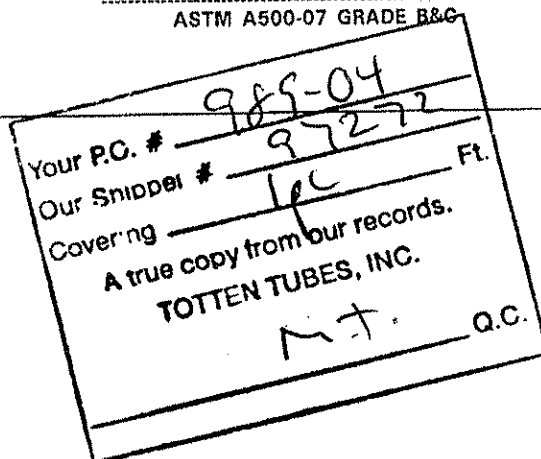
Material No: R066255004800

Made in: Canada

Purchase Order: 42532

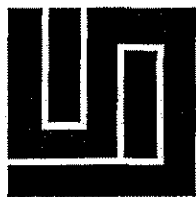
Heat No	C	Mn	P	S	Si	Al	Cu	Cb	Mo	Ni	Cr	V	Ti
R83455	0.190	0.780	0.013	0.006	0.009	0.036	0.030	0.005	0.005	0.020	0.030	0.001	0.001
Bundle No	Yield		Tensile		Eln.2in		Certification				CE: 0.33		
M100869166	067540 Psi		075920 Psi		30.9 %		ASTM A500-07 GRADE B&C						

Material Note:
Sales Or.Note:



Authorized by Quality Assurance:
The results reported on this report represent the actual attributes of the material furnished and indicate full compliance with all applicable specification and contract requirements.
Controlled using the AWS D1.1 method.





Louisiana Steel, Inc.

TEST

CERTIFICATE

316 Jungermann Rd. St. Peters, MO 63376
(636) 447-5255 fax (636) 447-6351

CUSTOMER Totten Tubes Inc.
500 Danlee Street
Azusa CA 91702

PO# 42305

PRODUCT ROUND TUBING

SIZE 6.000 X .500

SPECIFICATION ASTM A500 GR B

DATE 6/23/09
CERTIFICATE NO. 5004825
SALES ORDER 6670
MILL ORDER NO. 9621

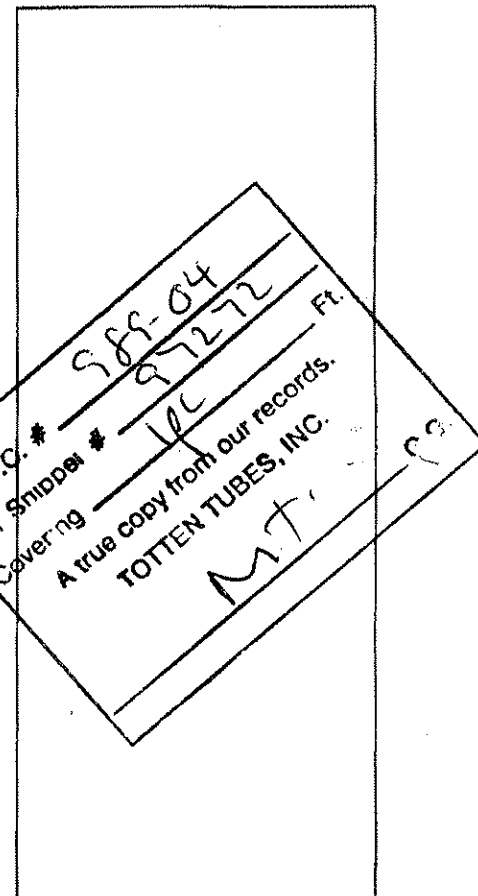
CHEMICAL ANALYSIS

HEAT NO.	C	Mn	P	S	Si	Ni	Cr	Mo	Al	Cu	V
5378-6048	.20	.86	.016	.006	.030	.010	.030		.027	.030	.001

PHYSICAL ANALYSIS

HEAT NO.	YIELD	TENSILE	ELONGATION	HARDNESS	FLATTENING	GRAIN SIZE	HEAT TREATMENT
5378-6048	68,100	77,600	33.0%		YES		

REMARKS



WE HEREBY CERTIFY THAT THIS CERTIFICATE
IS CORRECT AS CONTAINED IN OUR RECORDS.

[Signature]

QUALITY ASSURANCE MANAGER

ID: 935294

ArcelorMittal Burns Harbor Plate

QUALITY ASSURANCE
REPORT OF TEST AND ANALYSES

SHIPMENT NO. 802-38175	DATE SHIPPED 08-28-08	CAR OR VEHICLE NO. EJE-EOLA-BNSF	BN 621734	PAGE 4
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S O L D T O	PRIMARY STEEL LLC GARY STEEL CO DIV 1699 W GRAND AVE OAKLAND CA 94607	S H I P T O	PRIMARY STEEL INC GARY STEEL CO DIV BNSF SIDING 690 OAKLAND CA
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N O T E	SERIAL NUMBER	PAT NO.	HEAT NUMBER	NO. PCS.	SIZE AND QUANTITY				YIELD POINT	TENSILE STRENGTH	ELONG.	RED.
					THICKNESS	WIDTH OR DIA.	LENGTH	WEIGHT				

INCHES INCHES INCHES POUNDS PSI PSI IN % %
 QUALITY STEEL MELTED & MANUFACTURED IN THE U. S. A.

TEST PERFORMED AT A ARCELORMITTAL APPROVED LABORATORY

PLATES - ASTM A709-07 GR 50 TYPE 2, ASTM
 A572-07 GR 50 TYPE 2 --- SHD MILL -
 MILL EDGE

MFST - MILL EDGE - CUT LGTH ONLY MFST MILL SERIAL#
 LIFT MAX 20 TON UNLDG OH-PLATE HOOK LOAD MAX
 185000 #

CO# 6147703 GH 843-2015D

823B72300 4 3/4 96 360 29404 63100 88200 8 18
 62000 86900 8 20

PLATES - ASTM A709-03A GR 36, ASTM A 36-00A,
 ASME SA36 2004 EDITION

MFST - MFST MILL SERIAL# LIFT MAX 20 TON UNLDG
 OH-PLATE HOOK LOAD MAX 185000 #

CO# 6153164 GH 843-2076H

812C33280 1 1 1/2 96 240 9801 38600 67500 8 33

Q-QUENCH TEMPERATURE

T-TEMPER TEMPERATURE

N-NORMALIZE TEMPERATURE

SERIAL NUMBER	PAT NO.	HEAT NUMBER	HARD BHN	BEND	THICKNESS INCHES	TYPE	SIZE	DIR	TEST TEMP F	CHARPY IMPACT								
										ENERGY FT LBS			SHEAR(%)			LAT. EXP MILS		
										1	2	3	1	2	3	1	2	3

HEAT NUMBER	CHEMICAL ANALYSIS																	MQAID GRAIN SIZE
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Ti	Al	B	Cb	N	Sn		
823B72300	.19	1.30	.008	.005	.301	.022	.01	.02	.007	.060	.002	.034			.002	.009	.002	
812C33280	.15	1.11	.008	.007	.188	.024	.02	.03	.008	.001	.002	.034	.0002		.002	.004	.004	

I certify that the above results are a true and correct copy of actual results contained in records maintained by ArcelorMittal Burns Harbor and are in full compliance with the requirements of the specification cited above. This test report cannot be altered and must be transmitted intact with any subsequent third party test reports, if required.

BHPLTRPT.TIF

SUPV. QUALITY ASSURANCE

D. W. ELWOOD PER WNK



IPSCO
DIVISION OF SSAB

1770 Bill Sharp Boulevard, Muscatine, IA 52761-9412

Test Certificate

Form TCI: Revision 1: Date 31 Oct 2000

Customer: GARY STEEL C/O NAMASCO 500-500 COLONIAL CENTER PARKWA ROSWELL GA 30076 1606		Customer P.O. No.: 22860		Mill Order No.: 41-196562-01		Shipping Manifest: MR046378						
Product Description: ASTM A572-50/M345(06)/A709-50/M345(06A)				Ship Date: 16 Oct 07		Cert No: 061078029						
				Cert Date: 16 Oct 07		(Page 1 of 1)						
Size: 0.500 X 96.00 X 480.0 (IN)												
Tested Pieces		Tensiles		Charpy Impact Tests								
Heat Id	Piece Id	Piece Dimensions	YS (PSI)	UTS (PSI)	%RA	Elong % 2in 8in	Abs. Energy (FTLB)	% Shear	Tst Temp	Tst Dir	Tst Size (mm)	BDWTT
A7J157	D04	0.495 X 96.00 (DISCRTL)	50000	67000		35						
B7J635	D05	0.495 X 96.00 (DISCRTL)	59000	76000		36						
Chemical Analysis												
Heat Id	C	Mn	P	S	Si	Tot Al	Ca	Ni	Cr	Mo	Co	Ti
A7J157	.06	1.33	.009	.004	.31	.028	.24	.14	.19	.05	.001	.078
B7J635	.06	1.36	.010	.004	.31	.036	.34	.10	.18	.03	.001	.080
ORGN USA USA												
MERCURY IS NOT A METALLURGICAL COMPONENT OF THE STEEL AND NO MERCURY WAS INTENTIONALLY ADDED DURING THE MANUFACTURE OF THIS PRODUCT												
D05 MTR D1N EN-0204 TYPE 3.1 COMPLIANT.												
B7J635 D05 PCES: 5, WGT: 32739 A7J157 D04 PCES: 10, WGT: 65468												
Primary Steel LLC												
CUSTOMER CUSTOMER PO#												
Cust Part #:		WE HEREBY CERTIFY THAT THIS MATERIAL WAS TESTED IN ACCORDANCE WITH THE APPROPRIATE SPECIFICATION						B. H. Wales SENIOR METALLURGIST - PRODUCT				

04/20/2010 08:29 909-350-6257

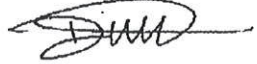
CAL STEEL > SALES

PAGE 03/04



California Steel Industries
14000 San Bernardino Ave.
Fontana, California 92335

CERTIFIED TEST REPORT

CUSTOMER ORDER 93-CT2096-000		MO. NUMBER 01-2608-05		CERTIFICATION DATE 04/20/10		RR: UP210054		TALLY NUMBER HS 250845643 1/														
BILL TO	PDM STEEL SERVICE CENTERS, INC. SUB. OF RELIANCE STEEL & ALUMINUM P.O. BOX 11188 FRESNO CA 93772				SHIP TO	PDM STEEL SERVICE, INC. (PDF) FERALLOY CORPORATION 936 PERFORMANCE DRIVE STOCKTON CA 95206																
TEST REPORT MUST ACCOMPANY ALL LOADS - NO EXCEPTIONS.																						
END USE	WAREHOUSE STOCK																					
PROD	H.R. SHEET PROCESSED COIL (ME) - PRIME																					
SPEC	ASTM-A-1011-08-CS-TYPE B																					
T/R 1	INSPECTION MILL																					
DESCRIPTION				COILS, PIECES OR BUNDLES	HEAT NUMBER																	
.1310 x 72.0000 x COIL NOM ME				1 1	T48013 T48447																	
I certify that the material described herein has been manufactured and tested in accordance with the requirements of the referenced specification, and the test results conform to the specification requirements.  Chief - Laboratory Services This steel is rolled, processed and substantially transformed in the USA.																						
MECHANICAL PROPERTIES						CHEMICAL ANALYSIS														05:12:13 04/19/10 MM		
HEAT OR LOT NUMBER	SLAB NUMBER	L O C	YIELD KSI	TENSILE STRENGTH KSI	% ELONGATION		BEND TEST	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	Al	V	Cb	Ti	B	N
					8"	2"																
T48013								07	.39	012	010	015	01	00	02	00	043	001	000	001	0001	001
T48447								08	.38	012	007	012	01	00	02	00	059	001	000	001	0001	002
Material is RoHS compliant																						

Bill To: PDM - STOCKTON, CALIFORNIA
P.O. BOX 310
STOCKTON
95201-0310

Ship To: 1
PDM STEEL SERVICE CENTER
3535 EAST MYRTLE STREET
SP SPUR# 8635
STOCKTON
95205

Order Date: 02/28/2008
PO No: ST2422
Mill Order No: 3449307
Load No: 1204958
Manifest No: 1913726

CA
US

GERDAU AMERISTEEL
Petersburg Mill
25801 Hofheimer Way
Petersburg, VA 23803
(804) 524-2855

SIZE W 24 X 117# / W610 X 174
W 24 X 117# / W610 X 174

GRADE 992/572-50

LENGTH 50 FT / 15.24 M

PRODUCT WF BEAMS

SPECIFICATIONS
ASTM A6-05a, A992-06a, A572-06

HEAT NO: 30424590

C 1.19 .011 .029 .24 .28 .09 .08 .019 .011 .001 .002 .019 .34

Mn P S Si Cu Ni Cr Mo Sn V Al Nb CE

CHEMICAL ANALYSIS											
PHYSICAL PROPERTIES											
Yield Strength			Tensile Strength			Specimen Area			Elongation		
KSI	MPa		KSI	MPa		Sq In	Sq cm		%	Gage Length	
51.7	356.5		70.8	488.1		1.231	7.94		25.0	8 In	200 mm
52.0	358.5		71.9	495.7		1.257	8.11		24.1	8 In	200 mm

Bend Test			ROA	
Dia.	Result		%	

All manufacturing processes of this product, including electric arc melting and continuous casting, occurred in the U.S.A.
CMTR complies with DIN EN 10204 3.1.B

"I hereby certify that the contents of this report are correct and accurate. All tests and operations performed by this material manufacturer or its sub-contractors, when applicable, are in compliance with the requirements of the material specifications and applicable purchaser designated requirements."

Signed: Tom L. Harrington: Quality Assurance Manager Date: Jul. 14, 2008
Signed: Notary Public (if applicable) Date:

NUCOR-YAMATO STEEL CO.

P O BOX 1228
BLTTHEVILLE AR 72316

DATE
9/29/09

CERTIFIED MILL TEST REPORT

100% MELTED AND MANUFACTURED IN U.S.A

All shapes produced by Nucor-Yamato Steel are cast and rolled to a fully killed and fine grain practice.

SOLD TO
SHIP TO

P.D.M. SERVICE CENTER
PO BOX 310
STOCKTON, CA 95201

P.D.M SERVICE CENTER - ST
P O BOX 310
3535 E. MYRTLE ST.
STOCKTON, CA 95201

INVOICE
316244
BILL OF LADING
965314

CUSTOMER NO.
8911
CUSTOMER P.O.
ST 4212 FF

*1

SPECIFICATIONS GRADE:

ASTM A709/A709M-09 GR50S (345S)

ASTM A992/A992M-06a A572/A572M GR50-07 ASTM A709/A709M-09 GR50 (345)
ASTM A6/A6M-08a

ITEM	ITEM DESCRIPTION	QTY	HEAT #	MECHANICAL PROPERTIES								CHEMICAL PROPERTIES												
				YIELD TO TENSILE RATIO	YIELD STRENGTH FBI MPa	TENSILE STRENGTH FBI MPa	ELONG % IN	CHARPY IMPACT		C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Cb	CE			
								TEMP F C	IMPACT ENERGY FT-LBS JOULES															
1	W12 - 96.0 60' W310 x143.0 18.288 M	2	338701	.75 .77	55000 56000	73000 73000	26 25					.071	.21	.019	.020	.23	.30	.11	.15	.03 .01	.00 .17	.022	.34	
2	W12 - 96.0 60' W310 x143.0 18.288 M	3	338703	.75 .78	55000 56000	73000 72000	25 26					.071	.20	.026	.020	.25	.29	.12	.19	.03 .01	.00 .16	.025	.34	
3	W12 -120.0 60' W310 x179.0 18.288 M	3	338688	.77 .76	55000 55000	71000 72000	28 27					.081	.20	.015	.023	.22	.25	.11	.13	.03 .01	.00 .17	.021	.33	
4	W12 -136.0 50' W310 x202.0 15.240 M	1	313022	.78 .76	59000 58000	76000 76000	26 26					.081	.36	.015	.017	.25	.28	.11	.09	.03 .01	.05 .18	.002	.37	
5	W12 -136.0 50' W310 x202.0 15.240 M	2	313024	.75 .76	55000 55000	73000 72000	27 27					.081	.35	.016	.022	.23	.27	.11	.12	.03 .01	.06 .19	.001	.38	

ELONGATION BASED ON 8.00 INCH GAUGE LENGTH

Pcm=C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B b-Approx .0005

Corrosion Index: CI=26.01(%CU)+3.88(%Ni)+1.2(%Cr)+1.49(%Si)+17.28(%P)-7.29(%Cu)(%Ni)-9.10(%Ni)(%P)-33.39(%Cu)²

CARBON EQUIVALENT CE = C+ Mn/6 + (Cr+Mo+V) / 5 + (Ni+Cu) / 15

ELONGATION BASED ON 8.00 INCH GAUGE LENGTH

 $Pcm = C + Si / 30 + Mn / 20 + Cu / 20 + Ni / 60 + Cr / 20 + Mo / 15 + V / 10 + 5B$ B-Approx .0005

Corrosion Index: $CI = 26.01(\%Cu) + 3.88(\%Ni) + 1.2(\%Cr) + 1.49(\%Si) + 17.28(\%P) - 7.29(\%Cu)(\%Ni) - 9.10(\%Ni)(\%P) - 33.39(\%Cu)^2$

CARBON EQUIVALENT CE - $C + Mn / 6 + (Cr + Mo + V) / 5 + (Ni + Cu) / 15$

I hereby certify that the contents of this report are accurate and correct. All test results and operations performed by this material manufacturer are in compliance with the requirements of the material specifications listed in the Specifications Block above.

GARY PENNELL

QUALITY ASSURANCE

STATE OF ARKANSAS

COUNTY OF MISSISSIPPI

SWORN TO AND SUBSCRIBED BEFORE ME THIS

Day of

NOTARY PUBLIC

Mill Test Report

Page 2



Issuing Date : 01/19/2010 B/L No. : 250779 Our Order No. : 78436/13 Cust. Order No. : 9299
Vehicle No: TTPX 805495 Ship To : RANGER STEEL
Specification : 2.0000" x 96.000" x 240.000" Sold To : RANGER STEEL SERVICES LP
ASTM A572 Grade 50-07/ASTM A709 Grade 50-09/AASHTO M270-50 1225 NORTH LOOP W. STE 650
Type 2 HOUSTON, TX 77008
ZONE 23 TRACK 415
HOUSTON, TX 77245

Marking :

Heat No	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	Al(tot)	V	Nb	Ti	N	Ca	B	Sn	CEQ	PCM
0500463	0.19	1.16	0.016	0.004	0.15	0.30	0.09	0.10	0.02	0.005	0.036	0.001	0.001	0.001	0.0002	0.0002	0.012	0.44	0.28
0500464	0.18	1.17	0.012	0.003	0.16	0.31	0.09	0.08	0.02	0.006	0.036	0.001	0.001	0.001	0.0003	0.0003	0.013	0.43	0.27
Charpy Impacts																			
Plate Serial No	Pieces	Tons	Dir.	Yield	Tensile	Elongation % in 2"	Elongation % in 8"	Dir.	(ft-lbs) 1	(ft-lbs) 2	(ft-lbs) 3	(ft-lbs) shear	(ft-lbs) shear	(ft-lbs) shear	(ft-lbs) shear	(ft-lbs) shear	Size	Temp (°F)	Min Ave.
0500463-04	4	26.13	T	54,500	81,700	16.3	16.0	H-L	20.0	27.3	31.0	26.1	26.1	26.1	26.1	26.1	10mm	-20	25
			T	56,300	82,700			H-L	26.7	29.4	22.3	27.4	27.4	27.4	27.4	27.4	10mm	-20	25
0500464-01	3	19.60	T	60,300	85,000	17.1	17.8	H-L	29.6	28.9	29.5	29.3	29.3	29.3	29.3	29.3	10mm	-20	25
			T	56,600	83,700														

A2881-00019

91625

RANGER STEEL
Q. APPROVED

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

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

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

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

Melted and manufactured in the USA. ISO 9001-2000 certified (#006461) by SRI Quality System Registrar (#0985-09). PED 97/23/EC 7/2 Annex 1, Para. 4.3 Compliant.

DIN 50048 3.1/EN 10204 3.1B(2004), DIN EN 10204 3.1(2005) compliant. For ABS grades only. Quality Assurance certificate 06-MMPQA-383

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

T. A. Depretis

T. A. Depretis, Metallurgist

01/25/2010 9:17:05 AM

A2880-00010
464400



EVRAZ INC. NA
EVRAZ Oregon Steel 14400 N. Rivergate Blvd., Portland, Oregon 97203

REPORT OF CHEMICAL/PHYSICAL TESTS

CERTIFICATE NO. 1080475
DATE Feb 25, 2010
PAGE 2



PDM STEEL SERVICE CENTER (FRESNO)
ATTN: ACCOUNTS PAYABLE
PO BOX 11188
FRESNO, CA 93772
USA

PITTSBURGH-DES MOINES / FRESNO
ATTN: ACCOUNTS PAYABLE
PO BOX 11188
FRESNO, CA 93772

SHIPPING NO. 1080475
DATE 02/25/2010
CARRIER UNION PACIFIC
CARTON NO. UP262091

THIS MATERIAL HAS BEEN MANUFACTURED, TESTED AND FOUND TO MEET THE SPECIFICATIONS AND PURCHASE ORDER REQUIREMENTS
HSLA STRUCTURAL QUALITY PLATE ASTM A572-07 GRADE 50 ASTM A709-97B GRADE 50.

PHYSICAL PROPERTIES

ITEM	DESCRIPTION	HEAT NO.	SLAB	YIELD PSI X 100	TENSILE PSI X 100	% ELONG 8" Z	% RA	HARDNESS BHN	IMPACTS
5	0.6250 X 96.000ME X 240.000 PT# 1744250								
	3 PCS 12252 LBS	M13741		550 575	665 30 690 27				
	2 PCS 8168 LBS	M13742		550 580	705 25 705 24				
	29 PCS 79232 LBS TOTALS								

CHEMICAL ANALYSIS

HEAT NO.	C	Mn	P	S	Si	Cu	Ni	V	Co	Al	Cr	Mo	Ti	B	N	Ca	CE
M13741	.08	1.07	.010	.001	.25	.01	.01	.014	.030	.037	.01	.00	.002		.0034		
M13742	.08	1.04	.010	.002	.26	.01	.01	.015	.031	.038	.01	.00	.002		.0022		
HEATS INDICATED WITH (+) WERE MELTED & MANUFACTURED IN THE USA. HEATS INDICATED WITH (^) WERE ROLLED IN THE USA.																	
.....	END OF REPORT	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

I certify the above to be correct as contained in the records of EVRAZ INC. NA By Chitika Technical Support Coordinator



4001 PHILADELPHIA PIKE
CLAYMONT, DELAWARE 19703

MATERIAL TEST REPORT

803

SOLD TO:				SPECIFICATION													
STROCAL, INC. 2324 NAVY DRIVE STOCKTON, CA				ASTM A572-04 Grade 55													
MILL ORDER	BILL OF LADING	CUSTOMER P.O. NO.	DATE														
180503	225367	W74280A-803/REV	01/27/06														
Unless otherwise specified, the following conditions apply: 1. Material is 100% melted and manufactured in the USA. 2. Mercury, radium or alpha source materials have not been used. 3. Test piece serial # represents actual plate tested, not necessarily plate shipped (except PVO where every plate is tested).																	
CHEMICAL ANALYSIS																	
HEAT	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	Sn	Al	V	Nb	N	Acid Soluble Al	Ti	B
1W380	0.15	1.42	0.023	0.022	0.35	0.48	0.19	0.18	0.048	0.019	0.009	0.110	0.003	0.011	0.009	0.003	0.0000
1W283	0.14	1.16	0.015	0.034	0.32	0.38	0.21	0.10	0.047	0.020	0.007	0.075	0.003	0.010	0.006	0.003	0.0000
TENSILE TESTS																	
HEAT	NO PCS	GAUGE (IN)	WIDTH (IN)	LENGTH (IN)	TEST PIECE SERIAL #	TENSILE (KSI)	YIELD (KSI)	ELONG % IN	BEND	TEST TEMP (F)	FT-LBS	MILS LAT EXP	% SHEAR				
1W380	1	0.8750	96.0000	480.0000	0000802520	95	67	23	2				3				
1W283	1	0.8750	96.0000	480.0000	0000801067	83	59	26	2				2				
IMPACT TESTS																	
OTHER TESTS / INFORMATION																	
Fine Grain Practice Reported Yield Strength is from 0.2% offset Method																	
I CERTIFY THE ABOVE RESULTS TO BE CORRECT AS CONTAINED IN THE RECORDS OF THE CORPORATION																	
D. J. Cernava																	
DAVID J. CERNAVA CHIEF METALLURGIST																	
Page: 4 (Tot Pgs: 13)																	