

DATE	12/28/12
INVOICE NO.	525802
BILL OF LADING	92967
CUSTOMER NO.	5446
CUSTOMER P.O.	600572

**NUCOR-YAMATO STEEL CO.**  
P.O. BOX 1228 • BLYTHEVILLE, AR 72316

**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 H I P T O  
FB-C/C JORGE MIGUEL MEDRANO SANCHEZ  
HIDALGO 3530 PAT 4100  
FINAL: SAN LUIS POTOSI, SLP MX  
NUEVO LAREDO, TM 88000

S P E C I F I C A T I O N S  
ASTM A992/A992M-11 A572/A572M GR50-07  
ASTM A709/A709M-11 GR50 (345)  
ASTM A709/A709M-11 GR50S (345S)  
ASTM A6/A6M-12

48503

S O L D T O  
FERRE BARNIEDO, SA DE CV  
AV REVOLUCION #81 COL SAN CRISTOBAL  
ECATEPEC DE MORELOS  
EDO, MEXICO CP 55000

ITEM #	ITEM DESCRIPTION	QTY	HEAT #	MECHANICAL PROPERTIES							CHEMICAL PROPERTIES											
				YIELD TO TENSILE RATIO	YIELD STRENGTH PSI	TENSILE STRENGTH PSI	ELONG %	CHARPY IMPACT		C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Cb	CE	
								TEMP °F	IMPACT ENERGY FT-LBS													
								°C	JOULES													
1	3 -118.0 40' W840 x176.0 12.192 M	8	396848	.80	55000	69000	27				.08	1.00	.014	.023	.24	.29	.12	.11	.03	.00	.021	.31
2	W33 -118.0 40' W840 x176.0 12.192 M	4	396849	.78	54000	69000	27				.07	1.00	.013	.022	.23	.28	.12	.11	.04	.00	.020	.30
3	W33 -118.0 40' W840 x176.0 12.192 M	3	396852	.81	55000	68000	28				.07	1.01	.014	.023	.23	.28	.12	.11	.03	.00	.020	.30
4	W33 -118.0 40' W840 x176.0 12.192 M	9	396856	.77	54000	70000	28				.07	1.00	.016	.020	.26	.27	.11	.11	.04	.00	.020	.30

**FERRE BARNIEDO, S.A. DE C.V.**  
**CERTIFICADO ORIGINAL DE NUESTROS ARCHIVOS,**  
**TEL. 58-36-10-00 PARA LA REMISION DE NUESTROS ARCHIVOS,**  
**ventas@ferrebarniedo.com.mx**

Wm = C + Si + Mn + Cu + Ni + Cr + Mo + V + Nb + Ti + B + N - Approx 0.005  
32 29 20 69 20 12 19  
CARBON EQUIVALENT: CE = CE(IIW) = C + Mn/6 + (Cr+Mo+V)/5 + (Ni + Cu)/15  
Mercury has not been used in the direct manufacturing of this material.  
Corrosion Index: CI = 25.01(%Cu) + 3.68(%Ni) + 1.20(%Cr) + 1.49(%Sb) + 17.28(%P) + 7.29(%Co)(%Ni) + 9.10(%Nb) + 33.39(%Cu)

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  
28 Day of 12/12

*Charlene Wallis* NOTARY PUBLIC

MY COMMISSION EXPIRES 10/21/2013

