

DATE	7/17/12
INVOICE NO.	495440
BILL OF LADING	74595
CUSTOMER NO.	5446
CUSTOMER P.O.	600426

**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.

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

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ASTM A992/A992M-11 A572/A572M GR50-07  
ASTM A709/A709M-11 GR50 (345)  
ASTM A709/A709M-11 GR50S (345S)  
ASTM A6/A6M-11

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FERRE BARNIEDO, SA DE CV  
AV REVOLUCION #81 COL SAN CRISTOBAL  
ECATEPEC DE MORELOS  
EDO, MEXICO CP 55000

47212

ITEM #	ITEM DESCRIPTION	QTY	HEAT #	MECHANICAL PROPERTIES							CHEMICAL PROPERTIES										
				YIELD TO TENSILE RATIO	YIELD STRENGTH	TENSILE STRENGTH	ELONGATION	CHARPY IMPACT		C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Cb	CE
					PSI	MPa		PSI	MPa												
1	W760 x173.0 12.192 M	5	389023	.76	54000	71000	29			.07	1.11	.020	.019	.29	.31	.11	.15	.03	.01	.020	.33
2	W760 x173.0 12.192 M	7	389024	.77	54000	70000	28			.08	1.11	.017	.022	.26	.28	.10	.11	.03	.01	.019	.33
3	W760 x173.0 12.192 M	6	389025	.76	54000	71000	28			.07	1.11	.015	.024	.28	.30	.11	.10	.03	.01	.021	.32
4	W760 x173.0 12.192 M	7	389029	.76	53000	70000	28			.07	1.11	.015	.022	.25	.27	.11	.11	.03	.01	.019	.31
5	W760 x173.0 12.192 M	11	389031	.77	53000	69000	29			.07	1.11	.014	.022	.28	.29	.10	.10	.03	.01	.021	.31

**LA ORIGINAL DE NUESTROS ARCHIVOS**  
**LA REMISION DE NUESTROS ARCHIVOS**  
**VENTAS@FERREBARNIEDO.COM.MX**  
**COPIA DE**

W = C + Si + Mn + Cu + Ni + Cr + Mo + V + S H = Approx. 100S  
30 20 20 60 20 15 10  
CARBON EQUIVALENT: CE = CE(IW) = 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 = 26.01(%Cu) + 3.88(%Ni) + 1.20(%Cr) + 1.49(%S) + 17.28(%P) - 7.29(%Cu)(%Ni) - 9.10(%Ni)(%P) - 33.39(%Cu)<sup>2</sup>

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 Lennell*  
QUALITY ASSURANCE

CUSTOMER COPY

STATE OF ARKANSAS COUNTY OF MISSISSIPPI  
SWORN TO AND SUBSCRIBED BEFORE ME THIS  
17 Day of 07/12  
*Charlene Wallis* NOTARY PUBLIC  
MY COMMISSION EXPIRES 10/21/2013  
**CHARLENE WALLIS**  
MY Comm. Exp. 10-21-2013  
PUBLIC NOTARY  
PPL CO. ARKANSAS