DATE	5/02/13
INVOICE NO.	552096
BILL OF LADING	108726
CUSTOMER NO.	5446
CUSTOMER P.O.	600675

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.

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

SPECIFICATIONS
ASTM A992/A992M-11 A572/A572M GR50-07
ASTM A709/A709M-11 GR50 (345)
ASTM A709/A709M-11 GR50S (345S)
ASTM A6/A6M-12

49353

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

ITEM #	ITEM DESCRIPTION	QTY	HEAT #	MECHANICAL PROPERTIES: YIELD TO TENSILE RATIO	YIELD STRENGTH PSI / MPa	TENSILE STRENGTH PSI / MPa	ELONG % / %	CHARPY IMPACT TEMP °F / °C	IMPACT ENERGY FT-LBS / JOULES	CHEMICAL PROPERTIES: C	Mn	P	S	Si	Cu	Ni	Cr	Mo / Sn	V / Pcm	Cb	CE / CI
	W24 - 68.0	12	403465	.77	54000	70000	27			.07	1.01	.013	.019	.23	.29	.10	.09	.03	.01	.021	.30
	40'			.78	54000	69000	26											.01	.15		
	W610 x101.0				372	483	27														
	12.192 M				372	476	26														
2	W24 - 68.0	6	404277	.79	55000	70000	28			.07	1.00	.017	.020	.22	.24	.12	.15	.04	.01	.019	.30
	40'			.78	54000	69000	27											.01	.15		
	W610 x101.0				379	483	28														
	12.192 M				372	476	27														
3	W24 - 68.0	6	404278	.79	55000	70000	27			.07	1.00	.017	.020	.22	.24	.11	.13	.04	.01	.019	.30
	40'			.80	56000	70000	28											.01	.15		
	W610 x101.0				379	483	27														
	12.192 M				380	483	28														
4	W24 - 68.0	5	404280	.78	54000	69000	28			.07	1.00	.012	.022	.23	.24	.11	.09	.03	.01	.019	.29
	40'			.79	54000	68000	28											.01	.15		
	W610 x101.0				372	476	28														
	12.192 M				372	469	28														
5	W24 - 68.0	19	404281	.78	54000	69000	28			.07	1.00	.013	.021	.22	.23	.12	.10	.04	.01	.018	.29
	40'			.78	53000	68000	28											.01	.15		
	W610 x101.0				372	476	28														
	12.192 M				368	469	28														
6	W24 - 68.0	15	404282	.79	53000	67000	27			.07	1.00	.012	.027	.22	.23	.11	.12	.04	.00	.018	.29
	40'			.79	54000	68000	28											.01	.15		
	W610 x101.0				365	462	27														
	12.192 M				372	469	28														

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

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=26.01(%Cu)+3.88(%Ni)+1.20(%Cr)+1.49(%Si)+17.28(%P)-7.29(%Cu)(%Ni)-9.10(%Ni)(%P)-33.39(%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.

Gary Lennell

QUALITY ASSURANCE

CUSTOMER COPY

STATE OF ARKANSAS COUNTY OF MISSISSIPPI
SWORN TO AND SUBSCRIBED BEFORE ME THIS 2 Day of 05/13

Charlene Wallis NOTARY PUBLIC

MY COMMISSION EXPIRES 10/21/2013

CHARLENE WALLIS MY Comm. Exp. NOTARY PUBLIC 10-21-2013 MISSISSIPPI CO. ARKANSAS

FERRE BARNIEDO, S.A. DE C.V.
ESTE CERTIFICADO ES COPIA FIEL DEL ORIGINAL DE NUESTROS ARCHIVOS.
AMPARA LA EMISION No.
TEL. 58 36 10 00 ventas@ferrebarniedo.com.mx