DATE	7/05/12
INVOICE NO.	493547
BILL OF LADING	73455
CUSTOMER NO.	5446
CUSTOMER P.O.	600410

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-11

47141

SOLD TO
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: 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
	10 -149.0	3	388866	.79	57000	72000	28			.07	1.13	.015	.020	.24	.27	.11	.12	.04	.01	.018	.32
	40'			.76	55000	72000	28											.01	.16		
	W1000x222.0				393	496	28														
	12.192 M				379	496	28														
2	W40 -149.0	2	388873	.78	56000	72000	28			.07	1.10	.014	.021	.25	.33	.12	.09	.04	.01	.019	.31
	40'			.76	55000	72000	26											.01	.16		
	W1000x222.0				386	496	28														
	12.192 M				379	496	26														
3	W40 -149.0	5	388875	.76	54000	71000	28			.07	1.11	.016	.024	.26	.28	.11	.10	.03	.01	.021	.32
	40'			.77	55000	71000	29											.01	.16		
	W1000x222.0				372	490	28														
	12.192 M				379	490	29														
4	W40 -149.0	7	388876	.76	56000	74000	28			.07	1.12	.014	.024	.29	.26	.11	.09	.03	.01	.020	.31
	40'			.77	56000	73000	29											.01	.16		
	W1000x222.0				386	510	28														
	12.192 M				386	503	29														
5	W40 -149.0	6	388878	.77	56000	73000	28			.08	1.10	.012	.027	.26	.25	.12	.12	.04	.01	.018	.31
	40'			.75	55000	73000	28											.01	.17		
	W1000x222.0				386	503	28														
	12.192 M				379	503	28														
6	W40 -149.0	3	388879	.76	55000	72000	28			.08	1.10	.013	.028	.28	[illegible]	.12	.11	.04	.01	.019	.32
				.78	56000	72000	28											.01	.17		
	W1000x222.0				379	496	28														
	12.192 M				386	496	28														
7	W40 -149.0	2	388880	.76	55000	72000	28			.08	1.14	.017	.026	.30	.29	.11	.12	.03	.01	.021	.33
	40'			.75	54000	72000	28											.01	.17		
	W1000x222.0				379	496	28														
	12.192 M				372	496	28														

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

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 5 Day of 07/12

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 REMISION No.
TEL. 58-36-10-00 ventas@ferrebarniedo.com.mx