DATE	5/22/12
INVOICE NO.	484183
BILL OF LADING	67966
CUSTOMER NO.	0829
CUSTOMER P.O.	4500088030

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
FORTACERO C/O GULF STREAM MARINE
PORT OF BROWNSVILLE

BROWNSVILLE, TX

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

SOLD TO
FORTACERO S.A. DE CV
BLVD CARLOS SALINAS DE GORTARI
KM 8.8
APODACA, N.L. MEXICO 66600

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 / Cl
1	W14 - 68.0	30	384444	.78	58000	74000	24			.06	1.30	.009	.017	.29	.27	.10	.08	.03	.05	.001	.33
	40'			.77	58000	75000	23											.01	.16		
	W360 x101.0				400	510	24														
	12.192 M				400	517	23														
2	W14 - 68.0	8	384447	.77	58000	75000	24			.06	1.30	.010	.023	.32	.26	.10	.09	.03	.06	.001	.34
	40'			.78	59000	76000	24											.01	.16		
	W360 x101.0				400	517	24														
	12.192 M				407	524	24														
3	W14 - 68.0	4	384449	.78	59000	76000	24			.06	1.32	.009	.022	.28	.28	.10	.07	.03	.05	.001	.34
	40'			.78	59000	76000	24											.01	.16		
	W360 x101.0				407	524	24														
	12.192 M				407	524	24														
4	W14 - 68.0	13	384452	.78	59000	76000	23			.06	1.30	.008	.015	.31	.26	.11	.08	.03	.05	.001	.33
	40'			.77	58000	75000	24											.01	.16		
	W360 x101.0				407	524	23														
	12.192 M				400	517	24														
5	W14 - 68.0	6	384454	.77	58000	75000	24			.06	1.30	.007	.017	.28	.28	.11	.07	.03	.05	.001	.34
	40'			.76	57000	75000	23											.01	.16		
	W360 x101.0				400	517	24														
	12.192 M				393	517	23														
6	W14 - 68.0	11	384456	.77	57000	74000	24			.06	1.31	.008	.020	.29	.26	.11	.08	.03	.05	.001	.33
	40'			.78	57000	73000	24											.01	.16		
	W360 x101.0				393	510	24														
	12.192 M				393	503	24														
7	W14 - 68.0	6	384458	.77	58000	75000	25			.06	1.30	.008	.022	.29	.26	.11	.09	.04	.05	.002	.34
	40'			.77	58000	75000	25											.01	.16		
	W360 x101.0				400	517	25														
	12.192 M				400	517	25														
8	W14 - 74.0	16	384458	.78	56000	72000	25			.06	1.30	.008	.022	.29	.26	.11	.09	.04	.05	.002	.34
	40'			.77	56000	73000	24											.01	.16		
	W360 x110.0				386	496	25														
	12.192 M				386	503	24														
9	W14 - 74.0	46	384460	.78	58000	74000	24			.05	1.30	.009	.023	.27	.26	.11	.07	.03	.05	.001	.32
	40'			.77	57000	74000	24											.01	.15		
	W360 x110.0				400	510	24														
	12.192 M				393	510	24														

$Pcm = C + \frac{Si}{30} + \frac{Mn}{20} + \frac{Cu}{20} + \frac{Ni}{60} + \frac{Cr}{20} + \frac{Mo}{15} + \frac{V}{10} + 5B$ B=Approx.0.005

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 Lemell

QUALITY ASSURANCE

CUSTOMER COPY

STATE OF ARKANSAS COUNTY OF MISSISSIPPI
SWORN TO AND SUBSCRIBED BEFORE ME THIS 22 Day of 05/12

Charlene Wallis NOTARY PUBLIC

MY COMMISSION EXPIRES 10/21/2018

CHARLENE WALLIS NOTARY PUBLIC MISSISSIPPI CO. ARKANSAS 10-21-2018