DATE	6/11/12
INVOICE NO.	488330
BILL OF LADING	70439
CUSTOMER NO.	5446
CUSTOMER P.O.	600400

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

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

FERRE BARNIEDO, S. DE C.V.
ESTE CERTIFICADO ES COPIA FIEL DE NUESTROS ARCHIVOS
ORIGINAL
LA REVISION
NO. 47028
DEL AMPARO
TEL. 58 36-10-00
ventas@ferrebarniedo.com.mx

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	Cr+Mo+V / Pcm	Cb	CE / CI
	4 -132.0		386970	.79	57000	72000	29			.07	1.21	.020	.023	.23	.26	.11	.15	.04	.03	.017	.33
	40'			.79	57000	72000	29											.01	.17		
	W360 x196.0				393	496	29														
	12.192 M				393	496	29														
2	W14 -132.0	1	386973	.79	57000	72000	28			.08	1.21	.022	.027	.26	.30	.10	.15	.04	.03	.016	.35
	40'			.78	58000	74000	27											.01	.18		
	W360 x196.0				393	496	28														
	12.192 M				400	510	27														
3	W14 -132.0	4	386974	.79	57000	72000	26			.07	1.20	.023	.028	.27	.29	.11	.15	.04	.02	.016	.34
	40'			.78	57000	73000	27											.01	.17		
	W360 x196.0				393	496	26														
	12.192 M				393	503	27														
4	W14 -132.0	3	386977	.79	56000	71000	28			.08	1.20	.018	.021	.28	.28	.12	.09	.05	.03	.017	.34
	40'			.78	56000	72000	29											.01	.18		
	W360 x196.0				386	490	28														
	12.192 M				386	496	29														
5	W14 -132.0	5	386978	.79	58000	73000	28			.08	1.20	.016	.021	.25	.29	.11	.12	.04	.02	.017	.35
	40'			.80	59000	74000	28											.01	.18		
	W360 x196.0				400	503	28														
	12.192 M				407	510	28														
6	W14 -132.0	8	386980	.78	57000	73000	27			.08	1.20	.017	.027	.26	.26	.11	.13	.04	.02	.016	.34
	'			.77	57000	74000	27											.01	.18		
	..360 x196.0				393	503	27														
	12.192 M				393	510	27														
7	W14 -132.0	6	386981	.78	57000	73000	28			.08	1.23	.018	.027	.29	.27	.12	.15	.04	.02	.016	.36
	40'			.78	57000	73000	28											.01	.18		
	W360 x196.0				393	503	28														
	12.192 M				393	503	28														
8	W14 -132.0	3	386983	.78	57000	73000	28			.08	1.24	.018	.027	.29	.28	.11	.13	.04	.03	.016	.36
	40'			.78	57000	73000	27											.01	.18		
	W360 x196.0				393	503	28														
	12.192 M				393	503	27														

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

CUSTOMER COPY

STATE OF ARKANSAS COUNTY OF MISSISSIPPI
SWORN TO AND SUBSCRIBED BEFORE ME THIS 11 Day of 06/12

Charlene Wallis NOTARY PUBLIC

MY COMMISSION EXPIRES 10/21/2013

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