DATE	10/18/11
INVOICE NO.	439046
BILL OF LADING	40980
CUSTOMER NO.	0829
CUSTOMER P.O.	4500081825

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 PORT MARINE
PORT OF BROWNSVILLE

BROWNSVILLE, TX

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

SPECIFICATIONS
ASTM A992/A992M-06a A572/A572M GR.50
ASTM A709/A709M-09 GR50 (345)
ASTM A709/A709M-09 GR50S (345S)
ASTM A6/A6M-09

ITEM #	ITEM DESCRIPTION	QTY	HEAT #	MECHANICAL PROPERTIES						C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Cb	CE
				YIELD TO TENSILE RATIO	YIELD STRENGTH PSI / MPa	TENSILE STRENGTH PSI / MPa	ELONG %	CHARPY IMPACT TEMP °F / °C	IMPACT ENERGY FT-LBS / JOULES									Sn	Pcm		Ceq
1	W24 - 55.0	2	373614	.78	56000	72000	24			.08	1.12	.023	.033	.28	.27	.13	.15	.04	.04		
	40'			.79	57000	72000	23											.01	.18		
	W610 x 82.0				386	496	24														
	12.192 M				393	496	23														
2	W24 - 55.0	22	373616	.79	56000	71000	23			.08	1.12	.023	.028	.26	.27	.14	.17	.04	.04		
	40'			.79	56000	71000	23											.01	.18		
	W610 x 82.0				386	490	23														
	12.192 M				386	490	23														
3	W24 55.0	39	373619	.75	55000	73000	23			.07	1.11	.023	.024	.29	.28	.12	.13	.04	.04		
	40'			.76	53000	70000	23											.01	.17		
	W610 x 82.0				379	503	23														
	12.192 M				365	483	23														
4	W24 - 55.0	35	373621	.76	54000	71000	24			.08	1.10	.021	.027	.30	.27	.11	.10	.04	.04		
	40'			.77	54000	70000	24											.01	.17		
	W610 x 82.0				372	490	24														
	12.192 M				372	483	24														
5	W24 - 55.0	99	373627	.76	57000	75000	23			.08	1.10	.023	.024	.28	.28	.12	.12	.04	.04		
	40'			.77	57000	74000	23											.01	.18		
	W610 x 82.0				393	517	23														
	12.192 M				393	510	23														
6	W24 - 55.0	26	373629	.77	57000	74000	24			.07	1.10	.023	.027	.27	.28	.12	.14	.04	.04		
	40'			.77	57000	74000	24											.01	.17		
	W610 x 82.0				393	510	24														
	12.192 M				393	510	24														
7	W24 - 55.0	18	373637	.75	52000	69000	27			.07	1.11	.017	.027	.27	.26	.12	.13	.04	.04		
	40'			.77	53000	69000	27											.01	.16		
	W610 x 82.0				359	476	27														
	12.192 M				365	476	27														
8	W24 - 68.0	2	372940	.79	58000	73000	27			.08	.93	.017	.026	.23	.31	.13	.15	.03	.03		
	40'			.81	59000	73000	28											.01	.15		
	W610 x101.0				400	503	27														
	12.192 M				407	503	28														
9	W24 - 68.0	4	372942	.79	57000	72000	26			.07	.91	.019	.019	.23	.33	.12	.14	.03	.00	.01	
	40'			.81	58000	72000	26											.01	.15		
	W610 x101.0				393	496	26														
	12.192 M				400	496	26														

Pcm = C + Si/30 + Mn/20 + Cu/20 + Ni/60 + Cr/20 + Mo/15 + V/10 + 5B Residuals (0.01)

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.

Doug Lemell

QUALITY ASSURANCE

CUSTOMER COPY

STATE OF ARKANSAS COUNTY OF MISSISSIPPI
SWORN TO AND SUBSCRIBED BEFORE ME THIS

18 Day of 10/11

Charlene Wallis NOTARY PUBLIC

MY COMMISSION EXPIRES 10/21/2013

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