CERTIFIED MILL TEST REPORT

DATE	4/24/13
INVOICE NO.	549878
BILL OF LADING	107425
CUSTOMER NO.	0829
CUSTOMER P.O.	FORTACERO

NUCOR-YAMATO STEEL CO.

P.O. BOX 1228 ● BLYTHEVILLE,AR 72316

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-12

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	C	Mn	P	S	Si	Cu	Ni	Cr	Mo / Sn	V / Pcm	Cb	CE / CI
1	W12 - 65.0	43	403227	.80	56000	70000	27			.07	1.03	.012	.026	.23	.22	.11	.13	.04	.01	.021	.30
	40'			.80	56000	70000	27											.01	.15		
	W310 x 97.0				386	483	27														
	12.192 M				386	483	27														
2	W12 - 65.0	66	403228	.79	55000	70000	27			.07	1.03	.012	.026	.23	.28	.10	.10	.03	.01	.022	.30
	40'			.81	57000	70000	26											.01	.15		
	W310 x 97.0				379	483	27														
	12.192 M				393	483	26														
3	W12 - 65.0	76	403230	.78	54000	69000	26			.07	1.00	.011	.024	.22	.28	.10	.10	.03	.01	.020	.30
	40'			.78	54000	69000	26											.01	.15		
	W310 x 97.0				372	476	26														
	12.192 M				372	476	26														
4	W12 - 65.0	55	403233	.79	55000	70000	27			.07	1.00	.010	.021	.22	.23	.11	.09	.04	.01	.020	.29
	40'			.79	55000	70000	27											.01	.15		
	W310 x 97.0				379	483	27														
	12.192 M		OK		379	483	27														
5	W12 - 65.0	61	403235	.79	55000	70000	26			.07	1.00	.012	.024	.21	.24	.10	.11	.04	.01	.019	.29
	40'			.76	54000	71000	26											.01	.15		
	W310 x 97.0				379	483	26														
	12.192 M				372	490	26														
6	W12 - 65.0	59	403238	.78	56000	72000	26			.08	1.02	.011	.021	.26	.23	.10	.10	.04	.01	.021	.30
	40'			.77	55000	71000	26											.01	.16		
	W310 x 97.0				386	496	26														
	12.192 M				379	490	26														
7	W12 - 65.0	28	403240	.77	55000	71000	26			.08	1.00	.013	.023	.24	.23	.10	.10	.04	.01	.021	.30
	40'			.76	54000	71000	26											.01	.16		
	W310 x 97.0				379	490	26														
	12.192 M				372	490	26														
8	W12 - 65.0	1	403248	.79	55000	70000	26			.07	1.00	.009	.023	.24	.27	.11	.10	.04	.00	.021	.30
	40'			.79	55000	70000	27											.01	.15		
	W310 x 97.0				379	483	26														
	12.192 M				379	483	27														
9	W12 - 65.0	10	403250	.77	55000	71000	27			.08	1.01	.010	.022	.23	.28	.11	.11	.04	.01	.019	.31
	40'			.79	56000	71000	27											.01	.17		
	W310 x 97.0				379	490	27														
	12.192 M				386	490	27														

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

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 24 Day of 04/13

Charlene Wallis NOTARY PUBLIC

MY COMMISSION EXPIRES 10/21/2015

CHARLENE WALLIS MISSISSIPPI CO. ARKANSAS