DATE	2/14/12
INVOICE NO.	463345
BILL OF LADING	55603
CUSTOMER NO.	0829
CUSTOMER P.O.	4500085420

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-06a A572/A572M GR50-07
ASTM A709/A709M-09 GR50 (345)
ASTM A709/A709M 09 GR50S (345S)
ASTM A6/A6M-09

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	W10 - 54.0	2	379936	.76	51000	67000	26			.08	1.03	.013	.029	.24	.27	.12	.11	.03	.00	.014	.31
	40'			.74	51000	69000	25											.01	.17		
	W250 x 80.0				352	462	26														
	12.192 M				352	476	25														
2	W10 - 54.0	3	379940	.75	53000	71000	25			.08	1.00	.013	.028	.25	.28	.13	.13	.03	.00	.014	.31
	40'			.75	52000	69000	26											.01	.17		
	W250 x 80.0				365	490	25														
	12.192 M				359	476	26														
3	W10 - 54.0	1	380139	.72	52000	72000	24			.08	1.10	.012	.023	.31	.29	.12	.11	.04	.00	.015	.32
	40'			.74	53000	72000	25											.01	.17		
	W250 x 80.0				359	496	24														
	12.192 M				365	496	25														
4	W10 - 54.0	16	380149	.72	52000	72000	25			.07	1.10	.011	.030	.27	.27	.11	.10	.04	.00	.016	.31
	40'			.72	52000	72000	27											.01	.16		
	W250 x 80.0				359	496	25														
	12.192 M				359	496	27														
5	W10 - 54.0	4	380150	.77	55000	71000	25			.08	1.10	.016	.029	.31	.28	.11	.14	.03	.00	.015	.32
	40'			.75	54000	72000	25											.01	.17		
	W250 x 80.0				379	490	25														
	12.192 M				372	496	25														
6	W10 - 54.0	35	380153	.74	54000	73000	26			.07	1.10	.016	.030	.28	.26	.11	.16	.04	.00	.015	.31
	40'			.71	52000	73000	25											.01	.16		
	W250 x 80.0				372	503	26														
	12.192 M				359	503	25														
7	W10 - 54.0	10	380155	.75	55000	73000	26			.08	1.10	.012	.029	.30	.32	.11	.11	.04	.00	.016	.32
	40'			.75	54000	72000	25											.02	.17		
	W250 x 80.0				379	503	26														
	12.192 M				372	496	25														
8	W10 - 54.0	1	380156	.78	58000	74000	27			.08	1.10	.014	.030	.31	.26	.12	.13	.03	.00	.024	.32
	40'			.77	55000	71000	27											.01	.17		
	W250 x 80.0				400	510	27														
	12.192 M				379	490	27														
9	W16 - 36.0	10	380114	.80	60000	75000	23			.08	1.10	.015	.030	.31	.26	.10	.09	.03	.00	.016	.30
	40'			.80	60000	75000	26											.01	.17		
	W410 x 53.0				414	517	23														
	12.192 M				414	517	26														

CHEMICAL PROPERTIES

$Pcm = C + \frac{Si}{30} + \frac{Mn}{20} + \frac{Cu}{20} + \frac{Ni}{60} + \frac{Cr}{20} + \frac{Mo}{15} + \frac{V}{10} + 5B$ (B=Approx. 0.0005)

CARBON EQUIVALENT: $CE = CE(ITW) = C + Mn/6 + (Cr+Mo+V)/5 + (Ni+Cu)/15$

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
14 Day of 02/12

Charlene Wallis NOTARY PUBLIC

MY COMMISSION EXPIRES 10/21/2014

CHARLENE WALLIS MISSISSIPPI CO. ARKANSAS