DATE	3/22/12
INVOICE NO.	471620
BILL OF LADING	60422
CUSTOMER NO.	0829
CUSTOMER P.O.	4500085097

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 PORT OF BROWNSVILLE
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 / CI
1	W10 - 49.0	1	380095	.75	54000	72000	24			.07	1.12	.015	.030	.31	.26	.11	.11	.03	.00	.021	.31
	40'			.73	52000	71000	25											.01	.16		
	W250 x 73.0				372	496	24														
	12.192 M				359	490	25														
2	W10 - 49.0	2	380118	.74	54000	73000	25			.07	1.10	.016	.026	.28	.29	.10	.11	.03	.00	.015	.31
	40'			.77	56000	73000	25											.01	.16		
	W250 x 73.0				372	503	25														
	12.192 M				386	503	25														
3	W10 - 49.0	4	382410	.76	54000	71000	26			.08	1.11	.011	.026	.27	.28	.12	.09	.03	.00	.014	.32
	40'			.74	54000	73000	26											.01	.17		
	W250 x 73.0				372	490	26														
	12.192 M				372	503	26														
4	W10 - 49.0	5	382447	.74	53000	72000	27			.07	1.11	.016	.025	.26	.31	.12	.12	.03	.00	.017	.32
	40'			.75	54000	72000	26											.01	.16		
	W250 x 73.0				365	496	27														
	12.192 M				372	496	26														

Pcm = C + Si/30 + Mn/20 + Cu/20 + Ni/60 + Cr/20 + Mo/15 + V/10 + 5B (Ito-Bessyo 1968)

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
22 Day of 03/12

Charlene Wallis NOTARY PUBLIC

MY COMMISSION EXPIRES 10/21/2015

CHARLENE WALLIS
MISSISSIPPI CO. ARKANSAS