DATE	11/08/11
INVOICE NO.	443722
BILL OF LADING	43830
CUSTOMER NO.	0829
CUSTOMER P.O.	4500082381

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	CHEMICAL PROPERTIES: C	Mn	P	S	Si	Cu	Ni	Cr	Mo / Sn	V / Pcm	Cb	CE / Ci
1	W18 76.0	1	373339	.81	56000	69000	28			.08	1.01	.012	.026	.25	.26	.10	.07	.03	.00	.020	.29
	40'			.81	56000	69000	28											.01	.16		
	W460 x113.0				386	476	28														
	12.192 M				386	476	28														
2	W18 - 76.0	55	374655	.79	54000	68000	29			.07	.90	.015	.026	.24	.30	.10	.08	.03	.00	.016	.27
	40'			.80	55000	69000	27											.01	.15		
	W460 x113.0				372	469	29														
	12.192 M				379	476	27														
3	W18 - 76.0	57	375244	.82	58000	71000	26			.07	1.00	.015	.020	.23	.28	.09	.11	.03	.00	.020	.29
	40'			.83	59000	71000	27											.01	.15		
	W460 x113.0				400	490	26														
	12.192 M				407	490	27														
4	W18 - 76.0	34	375247	.80	57000	71000	25			.08	1.00	.017	.021	.22	.29	.09	.10	.03	.00	.018	.31
	40'			.81	57000	70000	25											.01	.16		
	W460 x113.0				393	490	25														
	12.192 M				393	483	25														
5	W18 - 76.0	26	375248	.82	59000	72000	26			.08	1.00	.014	.020	.24	.31	.09	.10	.03	.00	.020	.31
	40'			.83	59000	71000	25											.01	.16		
	W460 x113.0				407	496	26														
	12.192 M				407	490	25														
6	W18 - 76.0	27	375249	.80	55000	69000	26			.07	1.00	.013	.025	.22	.30	.10	.08	.03	.00	.020	.29
	40'			.83	57000	69000	26											.01	.15		
	W460 x113.0				379	476	26														
	12.192 M				393	476	26														
7	W18 - 76.0	12	375250	.81	56000	69000	27			.07	1.01	.012	.018	.26	.26	.10	.09	.03	.00	.018	.28
	40'			.83	57000	69000	27											.01	.15		
	W460 x113.0				386	476	27														
	12.192 M				393	476	27														
8	W18 - 76.0	29	375252	.80	56000	70000	25			.08	1.00	.012	.019	.23	.27	.09	.09	.03	.00	.018	.29
	40'			.78	54000	69000	25											.01	.16		
	W460 x113.0				386	483	25														
	12.192 M				372	476	25														
9	W18 - 76.0	38	375255	.81	55000	68000	27			.08	1.00	.013	.027	.24	.27	.09	.10	.03	.00	.019	.30
	40'			.83	58000	70000	28											.01	.16		
	W460 x113.0				379	469	27														
	12.192 M				400	483	28														

Pcm = C + Si + Mn + Cu + Ni + Cr + Mo + V + 5 B Bethanis 2005 / 30 20 20 60 20 15 10

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 8 Day of 11/11

Charlene Wallis NOTARY PUBLIC

MY COMMISSION EXPIRES 10/21/2013

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