

AC1009951

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.

DATE	1/12/11
INVOICE NO.	387047
BILL OF LADING	9560
CUSTOMER NO.	0829
CUSTOMER P.O.	4500073758

NUCOR-YAMATO STEEL CO.
P.O. BOX 1228 • BLYTHEVILLE, AR 72316

S H I P T O
FORTACERO C/O GULF STREAM MARINE
PORT OF BROWNSVILLE

BROWNSVILLE, TX

S P E C I F I C A T I O N S
ASTM A992/A992M-06a A572/A572M GR50-07
ASTM A709/A709M-09 GR50 (345)
ASTM A709/A709M-09 GR50S (345S)
ASTM A6/A6M-09
IPR 21 x 6 1/2 x 66
IPR 21 x 6 1/2 x 74

S O L D T O
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								CHEMICAL PROPERTIES										
				YIELD TO TENSILE RATIO	YIELD STRENGTH	TENSILE STRENGTH	ELONG	CHARPY IMPACT		C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Cb	CE	
					PSI	PSI		%	TEMP													IMPACT ENERGY
					MPa	MPa		%	*F													FT-LBS
1	W21 - 44.0 50' W530 x 66.0 15.240 M	18	358214	.79	58000	73000	27				.07	.92	.013	.035	.25	.30	.13	.14	.04	.00	.016	.29
2	W21 - 44.0 50' W530 x 66.0 15.240 M	1	358228	.81	59000	73000	26				.07	.90	.013	.030	.26	.31	.12	.10	.03	.00	.021	.28
3	W21 - 50.0 40' W530 x 74.0 12.192 M	12	356007	.78	57000	73000	25				.08	.90	.022	.032	.23	.31	.13	.14	.04	.00	.016	.30
4	W21 - 50.0 40' W530 x 74.0 12.192 M	46	358250	.79	56000	71000	26				.08	.90	.018	.034	.24	.33	.10	.11	.03	.00	.021	.29
5	W21 - 50.0 40' W530 x 74.0 12.192 M	18	358252	.79	57000	72000	28				.08	.90	.012	.031	.28	.31	.11	.10	.03	.00	.018	.29
6	W21 - 50.0 40' W530 x 74.0 12.192 M	11	358253	.80	56000	70000	27				.07	.91	.016	.034	.21	.31	.11	.11	.03	.00	.015	.28
7	W21 - 50.0 40' W530 x 74.0 12.192 M	57	358256	.79	55000	70000	28				.07	.90	.019	.031	.24	.31	.11	.16	.03	.00	.016	.29
8	W21 - 50.0 40' W530 x 74.0 12.192 M	68	358258	.80	57000	71000	26				.07	.90	.014	.029	.23	.30	.12	.10	.03	.00	.019	.28
9	W21 - 50.0 40' W530 x 74.0 12.192 M	17	358260	.81	59000	73000	27				.08	.92	.009	.020	.25	.29	.12	.10	.03	.00	.020	.29

Wm = C + Si + Mn + Cu + Ni + Cr + Mo + V + Nb (As Applicable) 30 20 20 80 20 15 10
 CARBON EQUIVALENT: CE = CE(IIW) = C + Mn/6 + (Cr+Mo+V)/5 + (Ni+Cu)/15
 Corrosion Index: CI = 26.01(%Cu) + 3.88(%Ni) + 1.20(%Cr) + 1.48(%S) + 17.28(%P) + 7.28(%Cu)(%Ni) + 6.10(%Ni)(%P) + 33.38(%Cu)²
 Mercury has not been used in the direct manufacturing of this material.

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.

Greg Linnell
QUALITY ASSURANCE

CUSTOMER COPY

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

12 Day of 01/11

Charlene Wallis

NOTARY PUBLIC

MY COMMISSION EXPIRES 10/21/2015

