

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.

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FORTACERO C/O GULF STREAM MARINE
PORT OF BROWNSVILLE
BROWNSVILLE, TX

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ASTM A992/A992M-06a A572/A572M GR50-07
ASTM A709/A709M-09 GR50 (345)
ASTM A709/A709M-09 GR50S (345S)
ASTM A6/A6M 09

AC1009511

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FORTACERO S.A. DE CV
BLVD CARLOS SALINAS DE GORTARI
KM 8.8
APODACA, N.L. MEXICO 66600

DATE	7/13/10
INVOICE NO.	356717
BILL OF LADING	991023
CUSTOMER NO.	0829
CUSTOMER P.O.	4500067505

ITEM #	ITEM DESCRIPTION	QTY	HEAT #	MECHANICAL PROPERTIES				CHARPY IMPACT		CHEMICAL PROPERTIES											
				YIELD TO TENSILE RATIO	YIELD STRENGTH	TENSILE STRENGTH	ELONG	TEMP	IMPACT ENERGY	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Cb	CE
					PSI	PSI	%	° F	FT-LBS												
1	W12 40' 40'	40.0	59 349823	.75	55000	73000	25			.07	1.00	.013	.030	.24	.32	.10	.08	.02	.00	.017	.29
	W310 x 60.0 12.192 M			.77	56000	73000	26											.01	.15		
	W310 x 60.0 12.192 M				379	503	25														
	W310 x 60.0 12.192 M				386	503	26														
2	W12 40' 40'	40.0	33 349825	.77	57000	74000	25			.08	1.01	.013	.015	.22	.33	.11	.08	.02	.00	.016	.30
	W310 x 60.0 12.192 M			.77	57000	74000	25											.01	.16		
	W310 x 60.0 12.192 M				393	510	25														
	W310 x 60.0 12.192 M				393	510	25														
3	W12 40' 40'	40.0	19 349826	.78	58000	74000	26			.07	1.02	.013	.020	.25	.30	.10	.08	.03	.00	.016	.29
	W310 x 60.0 12.192 M			.77	57000	74000	26											.01	.15		
	W310 x 60.0 12.192 M				400	510	26														
	W310 x 60.0 12.192 M				393	510	26														
4	W12 40' 40'	40.0	23 349828	.77	54000	70000	27			.07	1.00	.013	.020	.24	.29	.10	.08	.02	.00	.015	.29
	W310 x 60.0 12.192 M			.79	55000	70000	26											.01	.14		
	W310 x 60.0 12.192 M				372	483	27														
	W310 x 60.0 12.192 M				379	483	26														
5	W12 40' 40'	40.0	115 349829	.80	57000	71000	27			.07	1.00	.014	.028	.25	.33	.10	.07	.03	.00	.020	.29
	W310 x 60.0 12.192 M			.80	56000	70000	26											.01	.15		
	W310 x 60.0 12.192 M				393	490	27														
	W310 x 60.0 12.192 M				386	483	26														
6	W12 40' 40'	40.0	129 349831	.79	55000	70000	27			.08	1.00	.014	.029	.28	.31	.10	.09	.03	.00	.015	.30
	W310 x 60.0 12.192 M			.76	53000	70000	27											.01	.16		
	W310 x 60.0 12.192 M				379	483	27														
	W310 x 60.0 12.192 M				365	483	27														
7	W12 40' 40'	40.0	152 349832	.79	56000	71000	26			.07	1.00	.013	.027	.27	.32	.10	.13	.03	.00	.018	.30
	W310 x 60.0 12.192 M			.78	56000	72000	26											.01	.16		
	W310 x 60.0 12.192 M				386	490	26														
	W310 x 60.0 12.192 M				386	496	26														
8	W12 40' 40'	40.0	68 349833	.78	56000	72000	26			.07	1.01	.012	.026	.28	.30	.11	.11	.03	.00	.015	.30
	W310 x 60.0 12.192 M			.79	56000	71000	26											.01	.16		
	W310 x 60.0 12.192 M				386	496	26														
	W310 x 60.0 12.192 M				386	490	26														
9	W12 40' 40'	40.0	22 349835	.77	56000	73000	26			.07	1.00	.016	.023	.25	.34	.12	.08	.03	.00	.015	.29
	W310 x 60.0 12.192 M			.77	55000	71000	27											.01	.15		
	W310 x 60.0 12.192 M				386	503	26														
	W310 x 60.0 12.192 M				379	490	27														

Form 1-11 Ni + Mn + Cu + Ni + Cr + V + S B B- Approx. 0005
30 20 20 20 15 10
CORROSION INDEX: CI = 26.01(%Cu) + 3.88(%Ni) + 1.20(%Cr) + 1.49(%S) + 17.28(%P) + 7.29(%Cu) + 9.10(%Ni) + (%P) + 33.39(%Cu)
2
Carbon Equivalent: CE = C + Mn/6 + (Cr+Mo+V)/5 + (Ni+Cu)/15
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
13 Day of 07/10
Charlene Wallis
NOTARY PUBLIC
MY COMMISSION EXPIRES 10/21/2013

