

DATE	5/22/12
INVOICE NO.	484184
BILL OF LADING	67966
CUSTOMER NO.	0829
CUSTOMER P.O.	4500088030

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-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						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	W14 - 74.0 40' W360 x110.0 12.192 M	12	384465	.77	58000	75000	25					.06	1.34	.010	.023	.32	.26	.11	.08	.03	.05	.002	.33
				.78	59000	76000	24													.01	.17		
					400	517	25																
					407	524	24																
2	W14 - 74.0 40' W360 x110.0 12.192 M	14	384466	.77	58000	75000	24					.06	1.30	.010	.023	.33	.28	.11	.06	.04	.05	.002	.34
				.77	58000	75000	25													.01	.17		
					400	517	24																
					400	517	25																
3	W14 - 74.0 40' W360 x110.0 12.192 M	4	384468	.77	58000	75000	24					.06	1.30	.010	.022	.32	.27	.10	.06	.04	.05	.001	.33
				.76	58000	76000	24													.01	.16		
					400	517	24																
					400	524	24																

$P_{cm} = C + \frac{Si}{30} + \frac{Mn}{20} + \frac{Cu}{20} + \frac{Ni}{60} + \frac{Cr}{15} + \frac{Mo}{15} + \frac{V}{10} + 3 B$ Approx. 1.3315

CARBON EQUIVALENT: $CE = CE(IIW) = C + \frac{Mn}{6} + \frac{(Cr+Mo+V)}{5} + \frac{(Ni+Cu)}{15}$

Corrosion Index: $CI = 26.01(\%Cu) + 3.88(\%Ni) + 1.20(\%Cr) + 1.48(\%Sb) + 17.28(\%P) + 7.79(\%Cu)(\%Ni) + 0.10(\%Ni)(\%P) + 33.38(\%Cu)^2$

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.

Gay Lennell

QUALITY ASSURANCE

CUSTOMER COPY

STATE OF ARKANSAS COUNTY OF MISSISSIPPI

SWORN TO AND SUBSCRIBED BEFORE ME THIS

22 Day of 05/12

Charlene Wallis NOTARY PUBLIC

MY COMMISSION EXPIRES 10/21/2019

