

DATE 12/15/10  
 INVOICE NO. 382149  
 BILL OF LADING 6358  
 CUSTOMER NO. 5446  
 CUSTOMER P.O. S32306

**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.

S  
H  
I  
P  
T  
O  
 FB C/O JORGE MIGUEL MEDRANO SANCHEZ.  
 HIDALGO 3530 PAT 4100  
 FINAL: SAN LUIS POTOSI, SLP MX  
 NUEVO LAREDO, TM 88000

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  
 43306

S  
O  
L  
D  
T  
O  
 FERRE BARNIEDO, SA DE CV  
 AV REVOLUCION #81 COL SAN CRISTOBAL  
 ECATEPEC DE MORELOS  
 EDO, MEXICO CP 55000

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	W10 - 33.0 10' - 33.0 W250 x 49.1 12.192 M	17	357478	.84	61000	73000	26				.07	1.00	.025	.034	.26	.34	.13	.16	.03	.00	.020	.3
2	W10 - 33.0 40' W250 x 49.1 12.192 M	23	357485	.82	60000	73000	26				.08	1.00	.015	.029	.27	.29	.12	.10	.03	.00	.020	.31
3	W10 - 33.0 40' W250 x 49.1 12.192 M	5	357557	.81	59000	73000	26				.07	1.05	.010	.023	.25	.37	.13	.09	.04	.00	.019	.31
4	W24 - 55.0 40' W610 x 82.0 12.192 M	12	357087	.81	58000	72000	26				.08	.93	.021	.035	.22	.30	.12	.12	.03	.00	.018	.30
5	W24 - 55.0 40' W610 x 82.0 12.192 M	12	357088	.80	57000	71000	27				.07	.92	.020	.034	.25	.30	.13	.13	.04	.00	.018	.28
6	W24 - 55.0 60' 10 x 82.0 18.288 M	3	357100	.77	55000	71000	26				.08	.92	.019	.034	.24	.27	.10	.13	.03	.00	.017	.28
7	W24 - 55.0 60' W610 x 82.0 18.288 M	3	357102	.80	57000	71000	26				.07	.90	.019	.035	.25	.32	.11	.12	.03	.00	.018	.28
8	W24 - 55.0 60' W610 x 82.0 18.288 M	3	357103	.79	57000	72000	26				.08	.91	.020	.027	.26	.32	.15	.14	.04	.00	.017	.30
9	W24 - 55.0 60' W610 x 82.0 18.288 M	3	357131	.81	58000	72000	26				.07	.92	.015	.035	.25	.34	.13	.11	.03	.00	.019	.28

$Pcm = C + \frac{2}{3}Mn + \frac{1}{6}Cu + \frac{1}{6}Ni + \frac{1}{6}Cr + \frac{1}{6}Mo + \frac{1}{6}V + \frac{1}{6}B$  Approx. 0005  
 30 20 70 50 20 15 10

CARBON EQUIVALENT: CE = CE(IIW) = C + Mn/6 + (Cr+Ni+V)/5 + (Ni+Cu)/15  
 Mercury has not been used in the direct manufacturing of this material.

Corrosion Index:  $CI = 26.01(\%Cu) + 3.88(\%Ni) + 1.20(\%Cr) + 1.42(\%Si) + 17.20(\%P) + 7.22(\%Cu)(\%Ni) + 9.10(\%Ni)(\%P) + 33.33(\%Cu)^2$

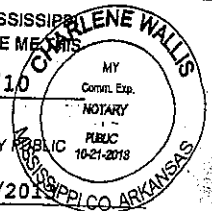
ELONGATION BASED ON 8.00 INCH GAUGE LENGTH

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 Linnell*  
 QUALITY ASSURANCE

STATE OF ARKANSAS COUNTY OF MISSISSIPPI  
 SWORN TO AND SUBSCRIBED BEFORE ME THIS  
 15 Day of 12/10

*Charlene Wallis*  
 NOTARY PUBLIC



CUSTOMER COPY

MY COMMISSION EXPIRES 10/21/2015