

DATE	4/27/12
INVOICE NO.	478774
BILL OF LADING	64758
CUSTOMER NO.	5446
CUSTOMER P.O.	600367

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

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ASTM A992/A992M-11 A572/A572M GR50-07
ASTM A709/A709M-11 GR50 (345)
ASTM A709/A709M-11 GR50S (345S)
ASTM A6/A6M-11

46759

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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	MPa	PSI	MPa	%													TEMP F
1	W920 x389.9 12.192 M	1	384831	.76	52000	68000	31				.08	1.10	.008	.026	.20	.31	.11	.10	.03	.01	.018	.32
2	W36 -262.0 40'	1	384836	.80	55000	70000	32				.08	1.11	.010	.025	.24	.27	.11	.11	.03	.01	.018	.33
3	W36 -262.0 40'	6	384926	.77	53000	69000	30				.08	1.10	.010	.025	.24	.29	.11	.10	.03	.01	.019	.32
4	W36 -262.0 40'	4	384930	.79	55000	70000	29				.08	1.20	.008	.024	.22	.27	.10	.08	.03	.03	.017	.33
5	W36 -262.0 40'	4	384933	.77	58000	75000	28				.07	1.30	.011	.021	.22	.30	.12	.09	.04	.04	.002	.35

ORIGINAL BARNIEDO, S.A. DE C.V.
 TEL 58-36-1000
 REMISION DE NUESTROS ARCHIVOS
 ventas@ferrebarniedo.com

Pcm = C + Si + Mn + Cu + Ni + Cr + Mo + V + S + B = Approx. 0.005
 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) + 7.29(%Ni) + 9.10(%Ni) + 33.39(%Co)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.

Day Lennell

QUALITY ASSURANCE

CUSTOMER COPY

STATE OF ARKANSAS COUNTY OF MISSISSIPPI
 SWORN TO AND SUBSCRIBED BEFORE ME THIS
 27 Day of 04/12

Charlene Wallis

NOTARY PUBLIC

MY COMMISSION EXPIRES 10/21/2013

