

DATE	5/02/12
INVOICE NO.	479751
BILL OF LADING	65346
CUSTOMER NO.	5446
CUSTOMER P.O.	600369

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
46765

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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	PSI		TEMP	IMPACT ENERGY													
					MPa	MPa		° F	FT-LBS													
											Sn	Pcm	CI									
36	-135.0 40'	2	385426	.77	54000	70000	29				.07	1.12	.017	.020	.22	.25	.11	.12	.03	.01	.020	.31
	W920 x201.0 12.192 M				372	483	29												.01	.16		
2	W36 -135.0 40'	14	385435	.79	55000	70000	28				.07	1.10	.014	.021	.22	.27	.12	.12	.03	.01	.018	.31
	W920 x201.0 12.192 M				379	483	28												.01	.16		
3	W36 -135.0 40'	5	385443	.79	55000	70000	30				.08	1.01	.01	.027	.26	.25	.12	.11	.04	.01	.021	.31
	W920 x201.0 12.192 M				372	483	30												.01	.17		
4	W36 -135.0 40'	3	385455	.79	56000	71000	28				.07	1.00	.015	.022	.20	.27	.12	.11	.03	.01	.019	.30
	W920 x201.0 12.192 M				372	490	26												.01	.15		
5	W36 -135.0 40'	5	385461	.75	54000	72000	27				.08	1.11	.020	.024	.22		.13	.03	.01	.019	.33	
	W920 x201.0 12.192 M				372	496	27												.01	.17		
6	W36 -135.0 40'	3	385466	.76	55000	72000	30				.08	1.10	.023	.020	.24	.31	.10	.16	.03	.01	.023	.33
	W920 x201.0 12.192 M				379	496	30												.01	.17		

ESTE ORIGINAL DE NUESTROS ARCHIVOS ES COPIA DE FERRE BARNIEDO, S.A. DE C.V.
AMPARA LA REMISION No. ventas@ferrebarniedo.com.mx
TEL. 58-36 10-00

Pcm = C + Si + Mn + Cu + Ni + Cr + Mo + V + 5 B Re-Approx. 0005
30 20 20 60 20 15 10
CARBON EQUIVALENT: CE = CE(MW) = C + Mn/6 + (Cr+Mo+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) + 1.49(%Si) + 17.28(%P) - 7.29(%Cu)(%Ni) - 9.10(%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 Lemell
QUALITY ASSURANCE

CUSTOMER COPY

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

2 Day of 05/12

Charlene Wallis
NOTARY PUBLIC

MY COMMISSION EXPIRES 10/21/2015

