

DATE	7/11/12
INVOICE NO.	494367
BILL OF LADING	73988
CUSTOMER NO.	5446
CUSTOMER P.O.	600411

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

47175

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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 STRENGTH PSI MPa	TENSILE STRENGTH PSI MPa	ELONG %	HARPY IMPACT TEMP F C	IMPACT ENERGY FT-LBS Joules	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Cb	CE		
1	W33 -118.0	1	388821	.77	54000	70000	29			.07	1.10	.017	.025	.25	.29	.11	.11	.03	.01	.021	.31	
	40'			.77	55000	71000	29												.01	.16		
	W840 x176.0																					
2	W33 -118.0	6	388826	.77	54000	70000	28			.07	1.10	.012	.023	.27	.27	.11	.11	.04	.00	.021	.31	
	40'			.78	56000	70000	27												.01	.16		
	W840 x176.0																					
3	W33 -118.0	7	388829	.77	54000	70000	28			.08	1.10	.013	.025	.23	.29	.12	.10	.03	.01	.018	.32	
	40'			.76	54000	71000	28												.01	.17		
	W840 x176.0																					
4	W33 -118.0	7	388832	.77	53000	69000	28			.08	1.11	.013	.028	.23	.24	.11	.12	.04	.01	.018	.32	
	40'			.77	54000	70000	28												.01	.17		
	W840 x176.0																					
5	W33 -201.0	1	388592	.77	54000	70000	28			.07	1.14	.015	.022	.20	.24	.11	.13	.04	.01	.020	.32	
	40'			.79	55000	70000	29												.01	.16		
	W840 x299.0																					
6	W33 -201.0	4	388622	.77	56000	73000	28			.07	1.21	.018	.023	.23	.24	.14	.13	.04	.02	.018	.34	
	40'			.79	57000	72000	28												.01	.17		
	W840 x299.0																					
7	W33 -201.0	1	388624	.79	56000	71000	28			.22	.019	.026		.24	.28	.11	.12	.03	.02	.017	.34	
	40'			.76	55000	72000	28												.01	.18		
	W840 x299.0																					
8	W33 -201.0	2	388626	.77	56000	73000	28			.08	1.22	.015	.027	.24	.29	.13	.18	.04	.02	.016	.36	
	40'			.79	57000	72000	28												.01	.18		
	W840 x299.0																					
9	W33 -201.0	1	388635	.78	56000	72000	28			.07	1.21	.022	.024	.24	.30	.11	.11	.03	.02	.017	.33	
	40'			.78	56000	72000	28												.01	.17		
	W840 x299.0																					

ORIGINAL CERTIFICADO DE BARNIEDO, S.A. COPIA DE ARCHIVOS
 LA REMISION DE NUESTROS ARCHIVOS
 ventas@ferrebarniedo.com.mx

Pen=C+Si+Mn+Cu+Ni+Cr+V+5B/100+Approx.0005 CARBON EQUIVALENT: CE=CE(HW)=C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15
 Corrosion Index: CI=26.01(%Cu)+3.88(%Ni)+1.20(%Co)+1.49(%Sb)+17.28(%P)+7.28(%Cu)+9.10(%Ni)+33.38(%Cu)
 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.

Gay Lemell

QUALITY ASSURANCE

CUSTOMER COPY

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

11 Day of 07/12

Charlene Wallis

NOTARY PUBLIC

MY COMMISSION EXPIRES 10/21/2015

