31620

NUCOR-YAMATO STEEL CO.

P O BOX 1228
BLYTHEVILLE AR 72316

DATE
6/29/06

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.

SOLD TO	SHIP TO	INVOICE	CUSTOMER NO.
FERRE BARNIEDO, S.A. DE C.V. AV REVOLUCION NO 81 SAN CRISTOBAL ECATEPEC EDO DE MEXICO 55000	FERRE BARNIEDO C/O TAF FORWARDING 1207 UNIROYAL DRIVE FINAL: SAN LUIS POTOSI, SLP MX LAREDO, TX	55549	5446
		BILL OF LADING	CUSTOMER P.O.
		792261	FERRE 24 2ND

2 SPECIFICATIONS GRADE: ASTM A992/A992M-04a A572/A572M GR50-04 ASTM A709/A709M-03a GR50 (345)
ASTM A709/A709M-03a GR50S (345S) ASTM A6/A6M-05a

ITEM	ITEM DESCRIPTION	QTY	HEAT #	MECHANICAL PROPERTIES: YIELD TO TENSILE RATIO	YIELD STRENGTH PSI MPa	TENSILE STRENGTH PSI MPa	ELONG %	CHARPY IMPACT: TEMP F C	IMPACT ENERGY FT-LBS JOULES	CHEMICAL PROPERTIES: C	Mn	P	S	Si	Cu	Ni	Cr	Mo / Sn	V / Pcm	Cb	CE / CI
1	W14 -120.0	6	275671	.75	54000	72000	24			.08	1.34	.025	.023	.22	.29	.11	.15	.03	.04	.001	.37
	40' P1415791			.76	55000	72000	25											.01	.18		
	W360 x179.0				372	496	24														
	12.192 M				379	496	25														
2	W14 -120.0	6	275673	.76	54000	71000	26			.08	1.32	.020	.025	.22	.26	.10	.13	.03	.04	.001	.36
	40'			.77	55000	71000	26											.01	.18		
	W360 x179.0				372	490	26														
	12.192 M				379	490	26														
3	W14 -120.0	3	275675	.76	55000	72000	25			.07	1.33	.022	.020	.23	.28	.12	.14	.04	.04	.002	.36
	40'			.77	55000	71000	25											.01	.17		
	W360 x179.0				379	496	25														
	12.192 M				379	490	25														
4	W14 -120.0	6	275676	.77	54000	70000	24			.06	1.31	.021	.017	.23	.28	.13	.10	.04	.04	.002	.35
	40'			.78	54000	69000	25											.01	.16		
	W360 x179.0				372	483	24														
	12.192 M				372	476	25														
5	W14 -120.0	7	275678	.76	55000	72000	26			.08	1.31	.020	.024	.25	.30	.15	.12	.04	.04	.002	.37
	40'			.77	56000	73000	25											.01	.19		
	W360 x179.0				379	496	26														
	12.192 M				386	503	25														
6	W14 -120.0	2	275680	.79	58000	73000	25			.08	1.31	.021	.021	.24	.28	.12	.13	.04	.04	.001	.37
	40'			.76	56000	74000	26											.01	.18		
	W360 x179.0				400	503	25														
	12.192 M				386	510	26														
7	W14 -120.0	3	275684	.77	53000	69000	25			.06	1.34	.020	.025	.21	.30	.14	.10	.04	.04	.002	.35
	40'			.76	52000	68000	24											.01	.17		
	W360 x179.0				365	476	25														
	12.192 M				359	469	24														
8	W14 -120.0	3	275896	.74	54000	73000	25			.06	1.31	.019	.021	.23	.32	.10	.11	.03	.00	.017	.34
	40'			.74	53000	72000	27											.01	.17		
	W360 x179.0				372	503	25														
	12.192 M				365	496	27														

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

ELONGATION BASED ON 8.00 INCH GAUGE LENGTH

CARBON EQUIVALENT CE = C+ Mn/6 + (Cr+Mo+V) / 5 + (Ni+Cu) / 15

Pcm=C+Si / 30+Mn / 20+Cu / 20+Ni / 60+Cr / 20+Mo / 15+V / 10+5B B approx .0005

Corrosion Index: CI=26.01(%CU)+3.88(%Ni)+1.2(%Cr)+1.49(%Si)+17.28(%P)-7.29(%Cu)(%Ni)-9.10(%Ni)(%P)-33.39(%Cu)²

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, and when designated by the purchaser, meet the applicable specifications.

GARY PENNELL
QUALITY ASSURANCE

STATE OF ARKANSAS
COUNTY OF MISSISSIPPI
SWORN TO AND SUBSCRIBED BEFORE ME THIS
_____ Day of _____
NOTARY PUBLIC