NUCOR-YAMATO STEEL CO.

P O BOX 1228
BLYTHEVILLE AR 72316

DATE
6/30/06

31640

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	55982	5446
		BILL OF LADING	CUSTOMER P.O.
		792460	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	W33 -152.0	5	276638	.75	55000	73000	28			.08	1.30	.017	.022	.22	.29	.11	.13	.03	.00	.018	.36
	40' IP 3312276 I			.75	54000	72000	27											.01	.18		
	W840 x226.0				379	503	28														
	12.192 M				372	496	27														
2	W33 -152.0	7	276642	.76	57000	75000	28			.08	1.30	.021	.022	.23	.31	.11	.13	.03	.00	.017	.36
	40'			.74	54000	73000	28											.01	.19		
	W840 x226.0				393	517	28														
	12.192 M				372	503	28														
3	W33 -152.0	5	276644	.78	56000	72000	27			.07	1.31	.022	.022	.22	.30	.09	.13	.03	.00	.019	.35
	40'			.74	54000	73000	26											.01	.18		
	W840 x226.0				386	496	27														
	12.192 M				372	503	26														
4	W33 -152.0	7	276648	.69	53000	77000	26			.08	1.41	.022	.019	.23	.27	.10	.16	.04	.00	.020	.38
	40'			.70	52000	74000	27											.01	.18		
	W840 x226.0				365	531	26														
	12.192 M				359	510	27														
5	W33 -152.0	3	276650	.72	53000	74000	27			.07	1.34	.022	.017	.22	.27	.12	.17	.04	.00	.020	.36
	40'			.73	54000	74000	28											.01	.17		
	W840 x226.0				365	510	27														
	12.192 M				372	510	28														

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

FERRE BARNIEDO, S.A. DE C.V.
ESTE ES COPIA FIEL DEL ORIGINAL DE NUESTROS ARCHIVOS
AMPARA LA REMISION No.
TEL 58-38-20-00 ventas@ferrebarniedo.com.mx