57674

DATE	12/16/13
INVOICE NO.	598660
BILL OF LADING	135485
CUSTOMER NO.	5829
CUSTOMER P.O.	4500106085

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.

SHIP TO
FORTACERO C/O DICEX INTERNATIONAL
8307 KILLAM INDUSTRIAL PARK
FINAL DESTINATION - MEXICO
LAREDO, TX 78045

SPECIFICATIONS
ASTM A992/A992M-11 A572/A572M GR50-07
ASTM A709/A709M-11 GR50 (345)
ASTM A709/A709M-11 GR50S (345S)
ASTM A6/A6M-12

SOLD TO
FORTACERO S.A. DE CV
BLVD CARLOS SALINAS DE GORTARI
KM 8.8
APODACA, N.L. MEXICO 66600

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 -145.0	7	414050	.78	56000	72000	27			.07	1.20	.012	.026	.23	.24	.11	.08	.04	.02	.019	.32
	40'			.79	57000	72000	27											.01	.16		
	W360 x216.0				386	496	27														
	12.192 M				393	496	27														
2	W14 -176.0	6	414088	.74	53000	72000	29			.08	1.30	.014	.025	.27	.24	.11	.13	.05	.05	.001	.37
	40'			.74	55000	74000	27											.01	.18		
	W360 x262.0				365	496	29														
	12.192 M				379	510	27														

Pcm = C + Si/30 + Mn/20 + Cu/20 + Ni/60 + Cr/20 + Mo/15 + V/10 + 5 B (Approx. only)

CARBON EQUIVALENT: CE = CE(IIW) = 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)+1.90(%Cr)+1.49(%Si)+17.28(%P)-7.29(%Cu)(%Ni)-9.10(%Ni)(%P)-33.39(%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.

Gary Lemmell
QUALITY ASSURANCE

CUSTOMER COPY

STATE OF ARKANSAS COUNTY OF MISSISSIPPI
SWORN TO AND SUBSCRIBED BEFORE ME THIS 16 Day of 12/13

Deborah Ann Rhodes
NOTARY PUBLIC

MY COMMISSION EXPIRES 07/17/2023

DEBORAH ANN RHODES
Commission # 12374555
NOTARY PUBLIC
My Commission Expires 7-17-2023
STATE OF ARKANSAS-MISSISSIPPI COUNTY