JPB 24x 12 3/4 x 155

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.

DATE	9/17/10
INVOICE NO.	367627
BILL OF LADING	997789
CUSTOMER NO.	0829
CUSTOMER P.O.	4500069787

SHIP TO
FORTACERO S.A. DE CV
C/O GULF STREAM MARINE
PORT OF BROWNSVILLE
BROWNSVILLE, TX

SPECIFICATIONS
ASTM A992/A992M-06a A572/A572M GR50-07
ASTM A709/A709M-09 GR50 (345)
ASTM A709/A709M-09 GR50S (345S)
ASTM A6/A6M-09

ACL0099186

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	CHARPY IMPACT ENERGY FT-LBS / JOULES	CHEMICAL PROPERTIES: C	Mn	P	S	Si	Cu	Ni	Cr	Mo / Sn	V / Pcm	Cb	CE / CI
1	W24 -104.0	41	353516	.79	53000	67000	27			.08	.92	.013	.026	.24	.32	.11	.10	.03	.00	.017	.29
	40'			.79	54000	68000	24											.01	.16		
	W610 x155.0				365	462	27														
	12.192 M				372	469	24														
2	W24 -104.0	45	353517	.78	53000	68000	27			.08	.91	.012	.025	.26	.33	.12	.10	.04	.00	.017	.29
	40'			.79	54000	68000	21											.01	.16		
	W610 x155.0				365	469	27														
	12.192 M				372	469	21														

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

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)+1.20(%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 17 Day of 09/10

Charlene Wallis NOTARY PUBLIC

MY COMMISSION EXPIRES 10/21/2013

CHARLENE WALLIS MY Comm. Exp. NOTARY PUBLIC 10-21-2013 MISSISSIPPI CO. ARKANSAS