

NUCOR-YAMATO STEEL CO.

P O BOX 1228
BLYTHEVILLE AR 72316

DATE
2/08/12

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

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

SHIP TO

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

INVOICE	CUSTOMER NO. 0829
BILL OF LADING	CUSTOMER P.O.

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

ITEM	ITEM DESCRIPTION	QTY	HEAT #	MECHANICAL PROPERTIES							CHEMICAL PROPERTIES													
				YIELD TO TENSILE RATIO	YIELD STRENGTH F80 MPa	TENSILE STRENGTH F80 MPa	ELONG %	CHARPY IMPACT		C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Cb	CE			
								TEMP F	IMPACT ENERGY FT-LBS													Sn	Pcm	CI
1	W24 -104.0	1	366797	.82	58000	71000	28				.071	1.00	.022	.025	.23	.31	.11	.16	.03	.00	.020	.31		
	40'			.82	58000	71000	26										.02	.16						
	W610 x155.0																							
	12.192 M																							
2	W24 -104.0	2	362578	.80	56000	70000	26				.07	.90	.015	.024	.20	.36	.11	.09	.03	.00	.016	.27		
	40'			.80	55000	69000	27										.01	.15						
	W610 x155.0																							
	12.192 M																							

ELONGATION BASED ON 8.00 INCH GAUGE LENGTH
 Pcm=C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B B-Approx .0005
 CARBON EQUIVALENT CE = 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)+1.2(%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 listed in the Specifications Block above.

GARY PENNELL
QUALITY ASSURANCE

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

NOTARY PUBLIC