DATE	7/15/11
INVOICE NO.	422199
BILL OF LADING	31155
CUSTOMER NO.	4829
CUSTOMER P.O.	4500078552

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
ACEROS DE GRADO C/O GULF STREAM MAR
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

SOLD TO
ACEROS DE GRADO, SA DE CV
AV FELIX U GOMEZ 2828 NTE COL MODER
RFC AGR0811247V9
MONTERREY, NL CP 64530

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	Cl / Cl
1	W27 -146.0	6	368748	.77	55000	71000	27			.07	1.10	.019	.025	.24	.30	.11	.13	.03	.00	.019	.31
	40'			.77	54000	70000	27											.01	.16		
	W690 x217.0				379	490	27														
	12.192 M				372	483	27														
2	W27 -146.0	3	369075	.78	58000	74000	27			.08	1.14	.006	.019	.26	.29	.09	.10	.03	.00	.019	.33
	40'			.78	58000	74000	28											.01	.17		
	W690 x217.0				400	510	27														
	12.192 M				400	510	28														
3	W27 -161.0	3	368724	.77	57000	74000	27			.08	1.27	.014	.023	.27	.30	.10	.10	.03	.02	.009	.35
	40'			.77	58000	75000	28											.01	.18		
	W690 x240.0				393	510	27														
	12.192 M				400	517	28														
4	W27 -161.0	1	368726	.78	57000	73000	26			.07	1.26	.017	.024	.24	.35	.10	.12	.03	.02	.009	.34
	40'			.77	56000	73000	26											.02	.17		
	W690 x240.0				393	503	26														
	12.192 M				386	503	26														
5	W27 -161.0	2	368727	.77	56000	73000	26			.08	1.25	.012	.018	.25	.31	.11	.06	.03	.02	.009	.34
	40'			.78	56000	72000	26											.01	.18		
	W690 x240.0				386	503	26														
	12.192 M				386	496	26														
6	W27 -161.0	1	368731	.76	54000	71000	28			.08	1.10	.013	.024	.25	.31	.12	.10	.03	.00	.018	.32
	40'			.76	55000	72000	27											.01	.17		
	W690 x240.0				372	490	28														
	12.192 M				379	496	27														
7	W30 - 99.0	37	368518	.77	55000	71000	26			.07	.93	.016	.024	.25	.26	.12	.08	.03	.01	[illegible]	
	40'			.79	54000	68000	27											.01	.15		
	W760 x147.0				379	490	26														
	12.192 M				372	469	27														
8	W30 - 99.0	36	368523	.79	55000	70000	26			.07	.92	.016	.025	.24	.27	.11	.11	.04	.01	.018	.33
	40'			.77	54000	70000	27											.01	[illegible]		
	W760 x147.0				379	483	26														
	12.192 M				372	483	27														
9	W30 - 99.0	6	368526	.82	58000	71000	26			.07	.93	.015	.021	.25	.30	.12	.08	.04	.02	.022	.29
	40'			.80	57000	71000	26											.01	.15		
	W760 x147.0				400	490	26														
	12.192 M				393	490	26														

$Pcm = C + \frac{Si}{30} + \frac{Mn}{20} + \frac{Cu}{20} + \frac{Ni}{60} + \frac{Cr}{20} + \frac{Mo}{15} + \frac{V}{10} + 5B$ (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 Lemell

QUALITY ASSURANCE

CUSTOMER COPY

STATE OF ARKANSAS COUNTY OF MISSISSIPPI
SWORN TO AND SUBSCRIBED BEFORE ME THIS 15 Day of 07/11

Charlene Wallis NOTARY PUBLIC

MY COMMISSION EXPIRES 10/21/2019

CHARLENE WALLIS MY Comm. Exp. NOTARY PUBLIC 10-21-2019 MISSISSIPPI CO. ARKANSAS