

24370

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.

NUCOR-YAMATO STEEL CO.
P.O. BOX 1228 • BLYTHEVILLE, AR 72316

DATE	12/18/12
INVOICE NO.	524509
BILL OF LADING	92217
CUSTOMER NO.	5446
CUSTOMER P.O.	600555

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

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ITEM #	ITEM DESCRIPTION	QTY	HEAT #	MECHANICAL PROPERTIES						CHEMICAL PROPERTIES												
				YIELD TO TENSILE RATIO	YIELD STRENGTH	TENSILE STRENGTH	ELONG	CHARPY IMPACT		C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Cb	CE	
								TEMP	IMPACT ENERGY													
								• F	FT-LBS													
	MPa	MPa	%	• C	JOULES														CI			
1	W12 -106.0 40'	10	396489	.75	54000	72000	27				.08	1.30	.013	.022	.24	.29	.11	.12	.03	.04	.002	.37
2	W12 -106.0 40'	20	396492	.77	57000	74000	26				.07	1.22	.015	.026	.26	.34	.13	.13	.04	.02	.019	.34
3	W12 -106.0 40'	6	396495	.78	58000	74000	26				.08	1.20	.012	.022	.22	.31	.13	.15	.03	.02	.017	.35
4	W12 -106.0 40'	3	396497	.77	58000	75000	26				.08	1.23	.012	.025	.26	.32	.12	.12	.03	.02	.019	.35

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

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.

Doug Lennell

QUALITY ASSURANCE

CUSTOMER COPY

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

18 Day of 12/12

Charlene Wallis NOTARY PUBLIC

MY COMMISSION EXPIRES 10/21/2018

