Customer No. 1377						R - YAMATO STEEL COMPANY x 1228; Blytheville AR 72316							CERTIFIED MILL TEST REPORT 100% Melted and Manufactured in the U.S.A. All Shapes produced by Nucor-Yamato Steel are cast and rolled to a fully killed and fine grain practice													
											Date				2023-06-01 08:11 AM											
										·	ASTM A992/A992M-20 A572/A572M GR50-18 ASTM A709/A709M-18 GR50 (345) ASTM A709/A709M-18 GR50S (345S) CSA G40.21-13 50WM (345WM) ASTM A6/A6M-19															
					Mech	Mechanical Properties						Chemical Properties														
Item	Item Description	QTY	Heat	Yield to Tensile Ratio	Yield Strength KSI MPA	Tensile Strength KSI MPA	ELONG % %	Charpy Temp ° F ° C	/ Impact Impact Energy Ft•Lbf J		Loc	С	Mn	Ρ	S	Si	Cu	Ni	Cr	Мо	v	Cb	CE	Sn	Pcm	CI
1	W14X074.0 40 ft 0 in W360X110 (12 m)	3	576231	0.76 0.76	62 61 425 420	81 80 558 549	24 24					.07	1.42	.010	.027	.34	.29	.16	.13	.05	.05	.001	.38	.01	.19	

 ELONGATION BASED ON 8.00 INCH GAUGE LENGTH
 CARBIG

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

 Corrosion Index
 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
 Boron I

 ISO 9001-2015 certified (Registration # 0985-07).
 This me

 Meets mechanical lab independence requirements of EN10204 type 3.1.
 The Charpy machine striker geometry used by Nucor-Yamato Steel is the 8 mm (0.315")striker (KV) per ASTM A370 Section 22.1.2 and ISO 148-1 Section 7.3.

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 Boron has not been intentionally added and will not exceed 0.0008% This material was produced in accordance with the Nucor-Yamato Steel Quality Manual.

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, and when designated by the purchaser, meet the applicable specifications.

Daug hennell

Gary Pennell Chief Metallurgist

State of Arkansas County of Mississippi Sworn to and subscribed before me

Deleccale Aver Hodes On 2023-06-01 My commission expires on 07/17/2023

