

Date: 5/3/2023 Tag: B15050223 TO: SENTRY SUPPLY dba SO#: A762328 Ln#: 1 PO#: P0241264-01 Part: 112500040* Qty: 1 Heat#: 570975*

Invoice No. [Blank]
 Bill of Lading LHM36787
 Customer No. 0883
 Customer P.O. SSW134331

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 03/16/2023 5:24 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

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	Sn	Pcm	C
				RSY	RTS			KSI	Temp	Impact Energy															
1 S12X050.0 60 Ft 0 in S310X74 (18.29 m)	4	568433	0.75 0.73	54 375	73 502	26 26						.08	1.15	.014	.022	23	.32	.13	.12	.04	.00	.020	.33	.01	.17
2 S12X050.0 60 Ft 0 in S310X74 (18.29 m)	1	570975	0.75 0.75	53 367	71 490	26 26						.08	1.11	.015	.025	24	.35	.20	.12	.05	.00	.016	.33	.01	.17
3 S12X050.0 60 Ft 0 in S310X74 (18.29 m)	5	570976	0.74 0.73	53 363	71 487	26 26						.07	1.12	.013	.021	24	.31	.16	.11	.04	.00	.016	.32	.01	.16

ELONGATION BASED ON 8.00 INCH GAUGE LENGTH
 $Pcm = C + S/30 + Mn/20 + Cu/20 + Ni/60 + Cr/20 + Mo/15 + V/10 + 5B$ (B=Approx. .0005)
 Corrosion Index = $26.01(\%Cu) + 3.88(\%Ni) + 1.2(\%Cr) + 1.48(\%Si) + 17.28(\%P) + 7.29(\%Cu)(\%Ni) + 9.10(\%Ni)(\%P) + 33.39(\%Cu)^2$
 ISO 9001:2015 certified (Registration # 0985-07).
 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.

Darryl Linnell
 Chief Metallurgist

State of Arkansas
 County of Mississippi
 Sworn to and subscribed before me
 on 2023-03-16
 My commission expires on 07/17/2023

