

## CERTIFICATE OF ANALYSIS



1819 Clarkson Rd.  
 Chesterfield, MO 63017  
 Phone: (636) 537-2600

Release Number: 572229

Ship Date: 10/07/2022

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**Customer Information**

PO #	SSW131133	END USE PO #	
CPO #		USE END USER PO #	
PART #	See Line Items Below...	CUSTOMER PART #	
REV LEVEL		SO #	817281

**Chemistry**

Heat Number	SM4881	MELTED AND MANUFACTURED IN THE USA							
C: 0.0600	Mn: 0.3700	P: 0.0040	S: 0.0020	Si: 0.0150	Cu: 0.1300	Al: 0.0260	V: 0.0020	Ni: 0.0300	Nb/CB: 0.0100
Cr: 0.0300	Ti: 0.0010	Mo: 0.0100	B: 0.0001	CE: 0.143	N: 0.0054	CA: 0.0012	Sn: 0.0020		

Tag No	Gage	Width	Length	Weight	Coating	Prod Plant	Part Number	Grade	Tensile	Yield	Elong
Product				Tag As							

200422622	0.0830	2.0000	288.0000	2.481		TRENTON	21280N083HR00AB24AA	A500 21 GRADE B & C	68179	64559	36.8
Hot Rolled 2" SQ X 0.083 HR X 24'											

**Chemistry**

Heat Number	SM3895	MELTED AND MANUFACTURED IN THE USA							
C: 0.0600	Mn: 0.5700	P: 0.0060	S: 0.0020	Si: 0.0270	Cu: 0.1300	Al: 0.0310	V: 0.0030	Ni: 0.0400	Nb/CB: 0.0040
Cr: 0.0500	Ti: 0.0010	Mo: 0.0100	B: 0.0003	CE: 0.183	N: 0.0054	CA: 0.0019	Sn: 0.0030		

Tag No	Gage	Width	Length	Weight	Coating	Prod Plant	Part Number	Grade	Tensile	Yield	Elong
Product				Tag As							

200379580	0.1250	3.0000	288.0000	2.280		TRENTON	21920N125HR00AB288A	A500 21 GRADE B & C	68000	64500	42
Hot Rolled 3" SQ X 0.125 HR X 24'											

200379594	0.1250	3.0000	288.0000	2.280		TRENTON	21920N125HR00AB288A	A500 21 GRADE B & C	68000	64500	42
Hot Rolled 3" SQ X 0.125 HR X 24'											

### CERTIFICATE OF ANALYSIS

**BULL MOOSE**  
 TUBES  
 1819 Clarkson Rd.  
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MELTED AND MANUFACTURED IN THE USA

**Chemistry** Heat Number **NM5147**  
 C: 0.2000 Mn: 0.3900 P: 0.0050 S: 0.0020 Si: 0.0250 Cu: 0.1000 Al: 0.0300 V: 0.0010 Ni: 0.0400 Nb/CB: 0.0060  
 Cr: 0.0500 Ti: 0.0010 Mo: 0.0100 B: 0.0001 CE: 0.291 N: 0.0061 CA: 0.0025 Sn: 0.0010

Tag No **200424631** Gage **0.1870** Width **2.0000** Length **480.0000** Weight **3.830** Coating **Tag As** Prod Plant **TRENTON** Part Number **31300N187HR00AB40S1** Grade **A500 21 GRADE B & C** Tensile **71979** Yield **54868** Elong **32.0**  
 Product: **Hot Rolled** 8" X 2" X 0.187 HR X 40'

MELTED AND MANUFACTURED IN THE USA

**Chemistry** Heat Number **NM4632**  
 C: 0.0500 Mn: 0.4100 P: 0.0030 S: 0.0030 Si: 0.0280 Cu: 0.1300 Al: 0.0350 V: 0.0010 Ni: 0.0050 Nb/CB: 0.0056  
 Cr: 0.0400 Ti: 0.0020 Mo: 0.0100 B: 0.0001 CE: 0.142 N: 0.0056 CA: 0.0019 Sn: 0.0010

Tag No	Gage	Width	Length	Weight	Coating	Prod Plant	Part Number	Grade	Tensile	Yield	Elong
Product					Tag As						
200388795	0.1200	2.5000	288.0000	4.586		TRENTON	21600N120HR00AB24TT	A500 21 GRADE B & C	65556	63434	41.5
Hot Rolled		2.5" SQ X 0.120 HR X 24'					Cust PO: SSW131133				
200388818	0.0830	2.5000	288.0000	3.140		TRENTON	21600N083HR00AB288S	A500 21 GRADE B & C	65556	63434	41.5
Hot Rolled		2.5" SQ X 0.083 HR X 24'					Cust PO: SSW131133				

MELTED AND MANUFACTURED IN THE USA

**Chemistry** Heat Number **NM4063**  
 C: 0.0500 Mn: 0.3900 P: 0.0040 S: 0.0020 Si: 0.0230 Cu: 0.1100 Al: 0.0260 V: 0.0020 Ni: 0.0300 Nb/CB: 0.0010  
 Cr: 0.0300 Ti: 0.0010 Mo: 0.0100 B: CE: 0.136 N: 0.0550 CA: 0.0019 Sn: 0.0001

Tag No	Gage	Width	Length	Weight	Coating	Prod Plant	Part Number	Grade	Tensile	Yield	Elong
Product					Tag As						

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200442721 0.1200 1.0000 288.0000 3.446 TRENTON 20640N120HR09AL24ST 0 0 0  
 Hot Rolled 1" SQ X 0.120 HR X 24' Cust PO: SSW131133 A513 20 AWHRAWPO

MELTED AND MANUFACTURED IN THE USA

Chemistry	Heat Number	NM3004	S: 0.0030	Si: 0.0220	Cu: 0.1200	Al: 0.0290	V: 0.0030	Ni: 0.0400	Nb/CB:
C: 0.0500	Mn: 0.3800	P: 0.0050							
Cr: 0.0400	Ti: 0.0010	Mo: 0.0100	B: 0.0001	CE: 0.138	N: 0.0062	CA: 0.0022			

Tag No	Gage	Width	Length	Weight	Coating	Prod Plant	Part Number	Grade	Tensile	Yield	Elong
200402110	0.0650	1.5000	288.0000	2.466		TRENTON	20960N065HR09AL24ST	A513 20 AWHRAWPO	0	0	0
Hot Rolled 1.5" SQ X 0.065 HR X 24'											

MELTED AND MANUFACTURED IN THE USA

Chemistry	Heat Number	NM0959	S: 0.002	Si: .021	Cu: .12	Al: .034	V: .001	Ni: .04	Nb/CB:
C: .06	Mn: .38	P: .008							
Cr: .05	Ti: .001	Mo:	B: .0002	CE: 0.147	N: .0060	CA: .0028			

Tag No	Gage	Width	Length	Weight	Coating	Prod Plant	Part Number	Grade	Tensile	Yield	Elong
200343438	0.0650	2.0000	288.0000	2.012		TRENTON	21280N065HR09AL24ST	A513 20 AWHRAWPO	0	0	0
Hot Rolled 2" SQ X 0.065 HR X 24'											

MELTED AND MANUFACTURED IN THE USA

Chemistry	Heat Number	232007	S: 0.0040	Si: 0.0200	Cu: 0.0150	Al: 0.0410	V: 0.0010	Ni: 0.0100	Nb/CB: 0.0270
C: 0.0605	Mn: 0.8600	P: 0.0080							
Cr: 0.0300	Ti: 0.0010	Mo: 0.0030	B: 0.0001	CE: 0.215	N: 0.0058	CA: 0.0019			

Tag No	Gage	Width	Length	Weight	Coating	Prod Plant	Part Number	Grade	Tensile	Yield	Elong
Product											

EN 10204:2004 TYPE 3.1 CERT

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MELTED AND MANUFACTURED IN THE USA

Chemistry Heat Number 22065122

C: .06 Mn: .36 P: .017 S: .002 Si: .03 Cu: .08 Al: .031 V: .002 Ni: .04 Nb/CB:

Cr: .06 Ti: .001 Mo: B: .0001 CE: 0.145 N: .0078 CA: .0023

Tag No	Gage	Width	Length	Weight	Coating	Prod Plant	Part Number	Grade	Tensile	Yield	Elong
Product					Tag As						
200372144	0.0830	2.0000	240.0000	3.136		TRENTON	31281N083HR09AL20ST	A513 20 AWHRAWPO	0	0	0
Hot Rolled		2" X 1" X 0.083 HR X 20'					Cust PO: SSW131133				

Total Certificate Weight: 45,577 LBS 20,673.4 KGS

THIS WELDED STEEL TUBING IS MANUFACTURED IN THE UNITED STATES OF AMERICA AND HAS BEEN PRODUCED IN ACCORDANCE WITH THE STATED SPECIFICATION. LADLE CHEMISTRIES ARE REPORTED FROM DOCUMENTS PROVIDED BY THE SUPPLYING STEEL MILL. ANY PHYSICAL AND MECHANICAL TESTING RESULTS SHOWN ON THIS CERTIFICATION ARE CORRECT AS CONTAINED IN THE RECORDS OF THE COMPANY.

*[Signature]*  
 Mark Miller  
 Corporate Quality Manager