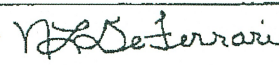


 ATI Flat Rolled Products 500 Green Street Washington, PA 15301	Certificate of Test		 Norman DeFerrari - Sr. Manager, Quality
	Mill Information		Customer Information
	Cert Number 0203531-00 Sales Order 50-119-508 Cert Date Jan-17-2020	Name ROLLED ALLOYS INC PO 0181675-TUL PO Date Nov-26-2019	

Sold to: ROLLED ALLOYS INC PO BOX 310 TEMPERANCE, MI 48182	Ship to: ROLLED ALLOYS LP 6555 SOUTH 57TH W AVE TULSA, OK 74131
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Material Information

"ATI 316/316L" STAINLESS STEEL PMP HOT ROLLED PLATE ANNEALED PICKLED COMMERCIAL CUT EDGE	
ASTM-A-240-18 ASTM-A-262-15 PRACTICE E AMS 5507H UNS S31600	ASME-SA-240 ED 2019 AMS 5524L R2014 UNS S31603

Piece Information

	Gauge	Width	Length					Total Wt
Pcs	(in)	(in)	(in)	Heat #	Piece ID	Section Id	Lot #	(lbs)
Item: 001	Cust-Id: 0006712			Govt-Contract-#:		Govt-DO-Rating:		
	Cust-Job:			Schedule B:				
1	.3750	96.0000	240.0000	859398	CF59555	---	493942	2639
1	.3750	96.0000	240.0000	859398	CF59556	---	493942	2639
1	.3750	96.0000	240.0000	859398	CF59557	---	493942	2639

Chemistry Testing

Element (wt %)	Requirements		Final Heat Analysis	
	Min	Max	859398	Loc
C	---	.030	.021	BN
MN	---	2.00	1.46	BN
P	---	.040	.033	BN
S	---	.030	< .001	BN
SI	---	.75	.31	BN
CR	16.00	18.00	16.25	BN
NI	10.00	14.00	10.10	BN
MO	2.00	3.00	2.05	BN
CU	---	.75	.45	BN
N	---	.10	.07	BN

RECEIVED
ROLLING
ALLOYS
Receiving Inspection
By: 
Date: 1-18-20
HEAT # 859398

TRACER # 0591157US



ATI
Flat Rolled Products

500 Green Street
Washington, PA 15301

Certificate of Test

N. DeFerrari

Noreen DeFerrari - Sr. Manager, Quality

Mill Information

Cert Number 0203531-00
Sales Order 50-119-508
Cert Date Jan-17-2020

Customer Information

Name ROLLED ALLOYS INC
PO 0181675-TUL
PO Date Nov-26-2019

Chemistry Testing

ATI Flat Rolled Products performs chemical analysis by the following techniques for testing locations TC, BN, & LO: C & S by combustion/infrared absorption per ASTM E1019; N & O by inert fusion/thermal conductivity per ASTM E1019; Mn, P, Si, Cr, Ni, Mo, Cu, Nb, Co, V, W by WDXRF per ASTM E572; Pb, Bi, Ag by GFAA per ASTM E1184; Al and Ti ($\geq 0.10\%$) by WDXRF per ASTM E572 otherwise by OES per ASTM E1086; Ta by ICP per ASTM E1479.

859398 - Material was produced by EF melting with AOD refining.
USA melt and manufacture
Material melted at ATI FRP Brackenridge (FRPB)

FRPB - ATI FRP BRACKENRIDGE 100 River Road Brackenridge, PA 15014

Mechanical Testing

		LOT 493942	
Condition:		ANNEALED	
Direction:		TRANSVERSE	
Temperature:		ROOM TEMP	
Spec:			
Test Limit	Units	Result	Loc
YS 0.2% OFFSET	psi	40600.	TC
TENSILE	psi	82400.	TC
ELONG. IN 2"	%	64.	TC
RED OF AREA	%	65.	TC
HARDNESS	---	138. HBW	TC

When hardness is measured using the Brinell scale, the indentation measuring device is Type A.

Bend test passed per periodic test requirement.

Mechanical Property Requirements

Condition:		ANNEALED	
Direction:		TRANSVERSE	
Temperature:		ROOM TEMP	
Spec:			
Test Limit	Units	Min	Max
YS 0.2% OFFSET	psi	30000.	---
TENSILE	psi	75000.	100000.

HEAT # 859398



TRACER # 0591157US

 ATI Flat Rolled Products 500 Green Street Washington, PA 15301	Certificate of Test		 Morean DeFerrari - Sr. Manager, Quality
	Mill Information Cert Number 0203531-00 Sales Order 50-119-508 Cert Date Jan-17-2020	Customer Information Name ROLLED ALLOYS INC PO 0181675-TUL PO Date Nov-26-2019	

Mechanical Property Requirements

Condition:		ANNEALED	
Direction:		TRANSVERSE	
Temperature:		ROOM TEMP	
Spec:			
Test Limit	Units	Min	Max
ELONG. IN 2"	%	45.	---
RED OF AREA	%	---	---
HARDNESS	---	---	217. HBW

Corrosion Testing

Test ID	Result Name	Test Result	Wt Loss	Units	Visual Exam	Pit Depth	Units	Bend	Loc	Requirements
LOT 493942	A-262 E/SCR A	STEP	---	---	---	---	---	---	TC	---

Metallography - General

Test ID	Result Name	Condition	Test Result	Loc	Requirements
493942	GRAIN SIZE	ANNEALED	4.	TC	---

Grain size per ASTM E112; Magnification at 100X; Etchant used OXALIC ACID

Certification Statements

Grade verification was performed spectroscopically.

EN 10204:2005 - 3.1 Certificate does not imply that material is an approved PED grade. For a complete listing of approved PED grades, visit our website at www.atimetals.com.

Material does not have a continuous carbide network.

ATI Flat Rolled Products has complied with all producer requirements of A56279.

Material was solution annealed at 1900F (1038C) minimum for a time commensurate with thickness and rapidly cooled with air or water.

ATI Flat Rolled Products does not use mercury in the testing or production of its products.

No welds/weld repairs performed.

The following test methods are used by the listed lab: ASTM E8 for all specimens for yield, tensile, and elongation except ISO 6892-1 for 80mm specimens; ASTM E290 for bend; ASTM E112 for grain size; ASTM E10, E18, E92, & E384 for hardness; ASME B46.1 Section 3 for surface roughness; AMS 2750 for laboratory heat treatment; ASTM E139 for stress rupture; ASTM E29 for rounding

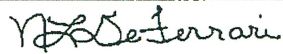
ATI FRP products have not come in contact with radioactive materials during manufacturing or processing.

EN 10204:2005 3.1 Certificate.

HEAT # 859398



TRANSFER # 0591157US

 ATI Flat Rolled Products 500 Green Street Washington, PA 15301	Certificate of Test		 Noreen DeFerrari - Sr. Manager, Quality
	Mill Information Cert Number 0203531-00 Sales Order 50-119-508 Cert Date Jan-17-2020	Customer Information Name ROLLED ALLOYS INC PO 0181675-TUL PO Date Nov-26-2019	

Certification Statements

General Statements

The Finishing Location for ALL PIECES is ATI-FRP
 The Shipping Location is ATI-FRP WASHINGTON, PA

TESTING WAS PERFORMED AT THE FOLLOWING LOCATIONS

BN = ATI FRP Brackenridge; 100 River Road; Brackenridge, PA 15014
 TC = ATI FRP Natrona Heights; 1300 Pacific Avenue; Natrona Heights, PA 15065

Knowingly and willfully recording any false, fictitious or fraudulent statement or entry on this document may be punished as a felony under Federal Statutes, including Federal Law, Title 18, Chapter 47.

WARNING: Processing that makes fumes, dust, or solutions may cause lung disease. Please see Safety Data Sheet for further information which has been supplied to your Purchasing Department. For an additional copy, please refer to our website at:
www.atimetals.com/Products/ati-sds

For access to online Certifications of Test, please register at MyATI.ATIMetals.com

This Certified Material Test Report is a true representation of the data on file. The reported results conform to the sales contract and specification(s) as set forth in ATI Flat Rolled Products order acknowledgement. This Certificate of Test may not be reproduced except in full without the written authorization of the company.

ATI Flat rolled Products website contains listing of material produced, general technical and contact information, and current quality and company accreditations including but not limited to ISO-9001, AS-9100, Nadcap, and ISO/IEC 17025. Please visit us at www.atimetals.com

HEAT # 859398



TRACER # 0591157US