McMASTER-CARR®

Certificate

330-995-5500
330-995-9600 (fax)
cle.sales@mcmaster.com

Purchase Order	Order Date	Placed By	McMaster-Carr Number	Number of Certificates
P1429322	7/20/2021	Jane Beattey	2294936-01	1

Line		Product	Ordered	Status	Certificate
2	89535K15	Multipurpose 304/304L Stainless Steel Rod, 1/2" Diameter, 6 Feet Long	8 each	8 each deliver July 21	159–2529

Your order is subject only to our terms and conditions, available at www.mcmaster.com or from our Sales Department.

outokumpu
high performance stainless steel

Certificate of Test

PRODEC QUALITY Page: 1

HEAT E201259 ORDER 697089/ 02 BOL 0253465 * CERTIFICATION * 05/10/21

SHIP TO:
ROLLED ALLOYS INC.
620 PIGEON HILL ROAD
(860)687-2157 MUST MAKE APPT
WINDSOR 060950000

HEAT # E201259
TRACER # 0620907US

---------- YOUR ORDER & DATE ----------
0192789-WIN 1/26/21 CUST# 0773001 CUST TAG#0009069

---------- ITEM DESCRIPTION ----------
GRADE 304L/304 PRODEC QUALITY Ship Condition CONDA
Size304L RND CDA CONDA .5000 x 144.000 RL
Country of Melt: UNITED KINGDOM Country of Mfg.: UNITED STATES
No weld repair
Free of mercury contamination, Free of radiation contamination
No WEEE relevant substances; Meets RoHS-2011/65/EU and 2015/863

Total Bundles 1 Total Weight 2192 Approx. Hot Red. Ratio 133:1

WO 2107261 Bundles: 1H

---------- SPECIFICATIONS ----------
MEG TO FINISHED BAR IN THE USA FROM BILLETS IMPORTED UNITED KINGDOM
AMS 5639J, 5647K
ASME BPVC.II.A-2019 SA-182
ASME SA-484 2019 Ed.
ASME SA-193 B8 2019 Edition
ASTM A262 15 Practice A/E
ASTM A314 19
ASTM A484/A484M 20b
ASTM A193 20 B8
NACE MR0175/ISO 15156-3:2015
Federal Spec QQ-S-763F
UNS S30403, AISI 304L
Prodec Quality
EN 10204 Type 3.1 Document
NACE MR0103-10
QTC is a prolongation of bar
ASME SA-276 2019 Edition
Sol Ann 1900F min/WQ
SAE AMS-QQ-S-763D
ASME SA-479 2019 Ed.
ASME SA-320 B8 CL1, 2019 Ed.
ASTM A182/A182M 20
ASTM A276/A276M 17
ASTM A479/A479M-20
ASTM A320 21a B8 Class 1
Solution Annealed Condition
DFARS 252.225.7009 10/4/11
UNS S30400, AISI 304
Free of Cont.carbide network
RA-53 RAM 304L
ASTM F899-20
ASTM F899-20
1.4301 X2CrNi18-9 304
ASTM A314 19
Bars are Eddy Current tested

---------- MECHANICAL & OTHER TESTS ----------

Hardness as shipped	240 HB		
Hardness as shipped	(98 HRB)		
Grain size	5.0	Tensile strength,KSI (MPa)	106.0 (731)
Micro	OK	0.2% Yield Strngth,KSI(MPa)	77.8 (536)
Intergranular corrosion	OK		
		Elongation % in 4D	46.0
		Reduction of area %	69.3

-- Continued --

RECEIVING INSPECTION
BY:
DATE: 5-19-21

Outokumpu Stainless Bar, LLC
3043 Crenshaw Pkwy.
Richburg, SC 29729

M.F. Marcinis

outokumpu
high performance stainless steel

Certificate of Test

PRODEC QUALITY Page: 2

HEAT E201259 ORDER 697089/ 02 BOL 0253465 * CERTIFICATION * 05/10/21

SHIP TO:
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WINDSOR 060950000

CHEMICAL COMPOSITION

Carbon	(C)	.024	Manganese	(Mn)	1.850
Phosphorus	(P)	.036	Sulphur	(S)	.024
Silicon	(Si)	.280	Chromium	(Cr)	18.120
Nickel	(Ni)	8.080	Cobalt	(Co)	.164
Copper	(Cu)	.560	Moly	(Mo)	.440
Nitrogen	(N)	.077	Columbium	(Cb)	.020
Titanium	(Ti)	.003	Aluminum	(Al)	.007
Tin	(Sn)	.013	Cerium	(Ce)	.006
Boron	(B)	.002	Tantalum	(Ta)	.001
Vanadium	(V)	.070	Tungsten	(W)	.040
Columbium/ Tantalum	(Cb+Ta)	.021			
Iron	(Fe)	Balance			
Melt Practice		EAF			
Refining Practice		AOD			
De-long Ferrite					

Knowingly & willfully falsifying or concealing a material act on this form, or making false, fictitious or fraudulent statements or representations herein could constitute a felony punishable under federal statutes.
We hereby certify that the test results shown in this report are correct and accurate as contained in the records of the company and are in compliance with the specifications, codes, and standards listed above.

M.F. Marcanio, Quality Manager

Outokumpu Stainless Bar, LLC
3043 Crenshaw Pkwy.
Richburg, SC 29729

M.F. Marcanio