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
P1439779	12/9/2021	Jane Beattey	1407798-01	1

Line		Product	Ordered	Status	Certificate
1	89495K89	304/304L Stainless Steel Tube, 1/4" Thick, 4" OD, 1' Long, Seamless	1 each	1 each delivers December 10	168–7799

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

PENN STAINLESS PRODUCTS, INC.

190 Kelly Road, Quakertown, PA 18951

Certificate of Mill Test Results

MCMASTER CARR **PO/Rel:** TA-49163230 **Contact:** FAX **Inv:** I600737 **Date:** 10/19/21

STNLS SEAMLESS TUBE SST 304/304L 4"OD x .250"W x 1' **Heat:** 11X548

WALSIN

MILL INSPECTION CERTIFICATE

EN 10204 3.1

1 - LB3347144
2 - LB3347145
3 - LB3347146
4 - LB3347147

CHANGSHU WALSIN SPECIALTY STEEL CO.,LTD. M1428849

CUSTOMER:	Penn Stainless Products,Inc	HEAT NO.:	11X548
DATE:	2020/01/19	SPECIFICATION:	ASTM A511-16/ASTM A269-15a
COMMODITY:	STAINLESS STEEL SEAMLESS TUBE	CERTIFICATE NO.:	2020011926768087
DELIVERY CONDITION:	COLD FINISHED,SOLUTION ANNEALED AND PICKLED	GRADE:	TP304/304L

CHEMICAL COMPOSITION (WT%)

ELEMENTS		C	Si	Mn	P	S	Ni	Cr	Mo	N	Cu	Ti	Nb	Nb+Ta	Co	V	B	Al	Sb	Pb	As	Sn	Fe	Bi	Zr	Al+Ti	PREN	Ferrite content
SPECIFICATION	min	0.000	0.000	0.000	0.000	0.0000	8.000	18.000																				
	max	0.035	1.000	2.000	0.040	0.0300	11.000	20.000																				
RESULTS		0.022	0.530	0.890	0.033	0.001	8.060	18.200							0.206													

SIZE OD(") ×WT(")×LG(mm)	BUNDLE NO.	PIECES	WEIGHT ft	WEIGHT kg	TS MPa	YS 0.2% MPa	YS 1% MPa	EL(50mm) %	HARDNESS HRB	FLATTENING TEST	FLARING TEST	I.C. TEST	SOAKING TEMP. of HEAT TREATMENT (WATER QUENCHED)	SOAKING TIME (MINUTES)	Lot No.	HYDROSTATIC TEST MPa	EDDY CURRENT TEST	ULTRASONIC TEST
4 1/2*0.500*6096-7315	RA21-31	5	113.94	1148	646	272	/	63	77.5/78	GOOD	GOOD	GOOD	1060℃	16	201912-TL-A01	/	/	GOOD
4*0.250*6096-7315	RA21-34	4	87.96	412	646	309	/	63	80.5/80	GOOD	GOOD	GOOD	1060℃	8	201912-TL-A29	/	/	GOOD
4*0.250*6096-7315	RA21-35	5	111.15	521	646	309	/	63	80.5/80	GOOD	GOOD	GOOD	1060℃	8	201912-TL-A29	/	/	GOOD
4*0.250*6096-7315	RA21-36	5	109.19	512	646	309	/	63	80.5/80	GOOD	GOOD	GOOD	1060℃	8	201912-TL-A29	/	/	GOOD
4*0.250*6096-7315	RA21-37	5	110.83	519	646	309	/	63	80.5/80	GOOD	GOOD	GOOD	1060℃	8	201912-TL-A29	/	/	GOOD
TOTAL:		24	533.07	3112														

1
3
2
E

Remarks:
AS PER PO NO.: PENN STAINLESS PO#P042719
The untested ends are cropped after NDE
IGC test per ASTM A262 E
Conformance to EN 10204 with applicable revision dates
Heat treatment process: 1060℃ water quenched
The material is free from Radioactive Contamination
Country of origin: China, Country of melt source:China
Material to meet NACE MR0103 /NACE MR0175/ISO 15156
ISO 9001: 2008 01 100 1532663
PED 97/23 EC, PED 2014/68 EU
EAF+LC/LF+VOD
RoHS directive 2002/95/EC
The material was manufactured, sampled, tested, and inspected in accordance with ASTM A999
Conflict Free

1.EACH LENGTH OF TUBEING RECEIVED FROM THE MANUFACTURER MAY BE INSPECTED BY THE PURCHASER AND,IF IT DOES NOT MEET THE REQUIREMENT OF THE SPECIFICATION BASED ON THE INSPECTION AND TEST METHOD AS OUTLINED IN THE SPECIFICATION ,THE LENGTH MAY BE REJECTED AND THE MANUFACTURER SHALL BE NOTIFIED .

2. WE HEREBY CERTIFY THAT THE MATERIAL HAS BEEN MADE BY AN APPROVED PROCESS AND HAS BEEN SATISFACTORILY TESTED IN ACCORDANCE WITH THE SOCIETY'S RULES AND STANDARDS FOR CLASSIFICATION.

3. NO REPAIR BY WELDING.MATERIAL FREE FROM MERCURY CONTAMINATION AND RADIOACTIVE CONTAMINATION.

4. THE CERTIFICATE SHALL NOT BE REPRODUCED EXCEPT IN FULL WITHOUT THE WRITTEN APPROVAL OF THE COMPANY.

Qin Li Jun

QUALITY MANAGER

ADDRESS: 2# HAIYANG ROAD, HAIYU TOWN, CHANGSHU CITY, JIANGSU PROVINCE, CHINA 215519 TEL: +86-512-52566260 FAX: +86-512-52568027

Certificate: 168-7799