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
P1525612	11/7/2024	Jonathan Wood	5066682-01	1

Line		Product	Ordered	Status	Certificate
1	8927K13	Multipurpose 4140 Alloy Steel Rod, 1" Diameter, 2 Feet Long	1 each	1 each delivers November 8	247–3904

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

Customer Name	Customer PO#	Shipper No	Heat Number
MCMASTER-CARR	TA-70247000	2423887	5395631

Republicsteel

401 ROSE AVE S E
MASSILLON, OH 44646

FAX: 330-837-7017

CERTIFICATE OF TESTS

REPUBLIC STEEL

5/15/2023
12:03:00 PM
PAGE 1 OF 1

PURCHASE ORD: CL-521722
PART NUMBER:
ORDER NUMBER: 1696684 - 01
HEAT: 5395631

PURCHASE ORDER DATE: 4/19/2023
ACCOUNT NUMBER: 5570-5196-01
SCHEDULE: 1978-31
REVISION: 1

CHARGE ADDRESS

PENNSYLVANIA STEEL CO INC
CLEVELAND OHIO DIVISION
4521 WILLOW PARKWAY
CUYAHOGA HTS, OH 44125

SHIP TO

PENNSYLVANIA STEEL CO INC
Tia Rambler - Office Mgr
CLEVELAND OHIO DIVISION
4521 WILLOW PARKWAY
CUYAHOGA HTS, OH 44125

MATERIAL DESCRIPTION

COLD FINISHED STEEL BARS ALLOY ASTM A331-95 FG ASTM A108-18 LEVEL 1 FG DIN EN10204 SECT 3.1
REVISION DTD JAN 2005 AISI-4140 FINE GRAIN COLD DRAWN ANN BEFORE CD
SIZE: RDS 1.0000 DIAM X 12FT 0.0000IN
RDS 25.4000MM DIAM X 3657.6000MM

LADLE CHEMISTRY %

C	MN	P	S	SI	CU	NI	CR
0.41	0.89	0.015	0.020	0.23	0.25	0.18	1.01
V	MO	SN	AL	CB	N		
0.004	0.21	0.010	0.018	0.001	0.0090		

CALCULATED TESTS

REDUCTION RATIO 58.0 TO 1

AUSTENITIC GRAIN SIZE 7

SEMI - FINISHED RESULTS

JOMINY HARDNESS TEST SAE J406/ASTM A255

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	18	20	22	24	26	28	30	32
58	58	58	57	56	55	55	55	54	52	51	49	48	47	45	43	42	40	39	38	37	37	36	36

FINISHED SIZE RESULTS

NOTES

REPUBLIC STEEL HEREBY CERTIFIES THAT THE MATERIAL LISTED HEREIN HAS BEEN INSPECTED AND TESTED IN ACCORDANCE WITH THE METHODS PRESCRIBED IN THE GOVERNING SPECIFICATIONS AND BASED UPON THE RESULTS OF SUCH INSPECTION AND TESTING HAS BEEN APPROVED FOR CONFORMANCE TO THE SPECIFICATIONS.

CERTIFICATE OF TESTS SHALL NOT BE REPRODUCED EXCEPT IN FULL.

ALL TESTING HAS BEEN PERFORMED USING THE CURRENT REVISION OF THE TESTING SPECIFICATIONS.

RECORDING OF FALSE, FICTITIOUS OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHED AS A FELONY UNDER FED STATUTES TITLE 18 CHAPTER 47.

THE MATERIAL WAS NOT EXPOSED TO MERCURY OR ANY METAL ALLOY THAT IS LIQUID AT AMBIENT TEMPERATURE DURING PROCESSING OR WHILE IN OUR POSSESSION.

NO WELD OR WELD REPAIR WAS PERFORMED ON THIS MATERIAL.

THE RESULTS REPORTED RELATE ONLY TO THE ITEMS TESTED.

SOURCE INFORMATION

MELT SOURCE: CANTON FLEX CASTER MELT COUNTRY: U.S.A
MELT METHOD: EF BILLET RED. RATIO: 58.0

END OF DATA — CC — END OF DATA

FILE 1 COPY

D. WHITE
DIRECTOR OF OPERATIONS VALUE ADD DIVISION

BY SHERRY STROUP