



North American Stainless Canada Inc.  
740 Imperial Road North  
Guelph, ON N1K1Z3  
Canada

# METALLURGICAL TEST REPORT

6870 Highway 42 East  
Ghent, KY 41045-9615  
(502) 347-6000

Certificate: 375252 3      Mail To:      Ship To:      Date: 1/25/2018      Page: 1  
Customer: 007130 023      ROLLED ALLOYS CANADA INC.      ROLLED ALLOYS CANADA INC.      Steel: 316/316L  
4008 51 AVENUE N.W.      4008 51 AVENUE N.W.      Finish: ST  
EDMONTON, AB T6B 3T5      EDMONTON, AB T6B 3T5      Corrosion: ASTM A262/15 Prac A/E OK  
Your Order: 1005687ED      NAS Order: DS 0013756 03      Red Ratio: 4.7 :1

### PRODUCT DESCRIPTION:

Round Bar, Annealed, Smooth Turned, Cold Finished  
~~UNS S31600/S31603, EN 10204 3.1, ASTM A484/16~~  
ASTM A276/17, ASTM A479/17, ASTM A182/16a CHEM ONLY,  
ASME SA479/13, ASME SA182/13 CHEM ONLY  
AMS 5648M/AMS 5653H, AMS QQS-763D, QQS 763F  
NACE MR0175-03/MR0103-05 (MID RADIUS ONLY),  
SOLUTION ANNEAL TEMP 1900F MIN, ASTM A320/17a CL 1 GR B8M  
ASTM A193/16-ASME SA193/13 CL 1 GR B8M (EXC PAR 6.2)

### REMARKS:

COMPLIES W/REQUIREMENTS OF DFAR 252.225-7009 EU DIRECTIVE  
2011/65/EU.RoHS. EAF+AOD+CC. NO WELD REPAIR. MELTED AND MFG  
IN USA FREE FROM MERCURY AND LOW MELTING ALLOY CONTAMINATION

Product Id	Skid #	Diameter	Size	Weight	-----Length-----	Mark	Pieces	Commodity Code
IA4103 4		4.0000		1,001	144.00	3	1	


### CHEMICAL ANALYSIS

Lab Accreditation Bureau, ISO/IEC 17025, Certificate# L2323  
Chemical Analysis per ASTM A751/14a

NAS Heat	CM	C %	CO %	CR %	CU %	MN %	MO %	N %	NI %	P %
624J	US	.023	.32	16.69	.45	1.33	2.077	.037	10.58	.033
		S %	SI %							
		.0285	.22							

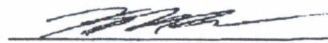
### MECHANICAL PROPERTIES

Product Id	l o c a t i o n	HB	.2YS KSI	UTS KSI	RA %	Elong % 4D
IA4103 4	R L	182.0	45.00	91.00	67.00	46.00

HEAT # 624J  
  
 TRACER # 0003899ED

ROLLED ALLOYS  
 Final Inspection  
 By: Juan Aulins  
 Date: 2/6/18

NAS hereby certifies that the analysis on this certification is correct. Based upon the results and the accuracy of the test methods used, the material meets the specifications stated. These results relate only to the items tested and this report cannot be reproduced, except in its entirety, without the written approval of NAS.

Technical Dept. Mgr.   
KRIS LARK      1/25/2018

Sep 23/18

ANS