



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: 400385 1 Mail To: Ship To: Date: 4/10/2018 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: RT
EDMONTON, AB T6B 3T5 EDMONTON, AB T6B 3T5
Your Order: 1006111ED NAS Order: DS 0014386 01 Corrosion: ASTM A262/15 Prac A/E OR
Red Ratio: 4.7 :1

PRODUCT DESCRIPTION:
Round Bar, Hot Rolled, Annealed, Rough Turned
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, ASTM P899/12b
AMS 5648M/AMS 5653H, AMS QQS-763D, QQS 763F
NACE MR0175-15/MR0103-15 (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 DPAR 252.225-7009 EU DIRECTIVE
2011/65/EU. RoHS. EAP+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
IA4219 8		4.0000		1,044	144.00	1	1	

Lab Accreditation Bureau, ISO/IEC 17025, Certificate# L2323

CHEMICAL ANALYSIS CM(Country of Melt) ES(Spain) US(United States) ZA(South Africa) JP(Japan) Chemical Analysis per ASTM A751/14a

NAS Heat	CM	C %	CO %	CR %	CU %	MN %	MO %	N %	NI %	P %
745Y	US	.016	.32	16.64	.33	1.37	2.021	.046	10.54	.032
		S %	SI %							
		.0250	.28							

MECHANICAL PROPERTIES

Product Id	l o c a l i d e n t i f i c a t i o n	HB	.2YS KSI	UTS KSI	RA %	Elong % 4D
IA4219 8	R L	141.0	37.00	82.00	71.00	61.00

HEAT # 745Y

TRACER # 0004177ED

ROLLED ALLOYS Receiving Inspection
By: [Signature]
Date: 4/17/18

NAS hereby certifies that the analysis on this certification is in accordance with 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. [Signature]
KRIS LARK 4/10/2018
Sep 23/19 NAS