



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: 519166 5    Mail To:    Ship To:    Date: 6/28/2019    Page: 1  
 ENCORE METALS, DIV. OF RMCL    ENCORE METALS, DIV. OF RMCL  
 Customer: 007175 007    7805 51ST STREET S.E.    7805 51ST STREET S.E.  
 CALGARY, AB T2C 2Z3    CALGARY, AB T2C 2Z3  
 Finish: RT  
 Corrosion: ASTM A262/15 Prac A/E OK  
 Red Ratio: 3.0 :1  
 Your Order: P119483875-mtch    NAS Order: PN 0105975 06    Heat Treat Code: 53,211

**PRODUCT DESCRIPTION:**

Round Bar, Hot Rolled, Annealed, Rough Turned  
 UNS S31600/S31603 EN 10204 3.1, ASTM A484/18  
 ASTM A276/17, ASTM A479/18, ASTM A182/18 CHEM ONLY,  
 ASME SA479/17, ASME SA182/18 CHEM ONLY,  
 AMS 5648/M, AMS 5653/H, AMS-QQS-763/D, QQS:763/F  
 NACE MR0175/15 (MID RADIUS ONLY), MR0103/15 (MID RADIUS ONLY)  
 SOLUTION ANNEAL TEMP 1900F MIN, ASTM A320/17a CL 1 GR B8M  
 ASTM A193/17, ASME SA193/17 CL 1 GR B8M (EXC PAR 6.2)  
 GRAIN SIZE = 6-8

**REMARKS:**

COMPLIES W/REQUIREMENTS OF DFAR 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

*P119483 R155296 509364 C16F 875*

Product Id	Skid #	Diameter	Size	Weight	Length	Mark	Pieces	Commodity Code
BK4402 6		5.0000		1,744	144.00	9	1	

ANAB, ISO/IEC 17025, Certificate# L2323  
 Chemical Analysis per ASTM A751/14a

**CHEMICAL ANALYSIS**    CM(Country of Melt)    ES(Spain)    US(United States)    ZA(South Africa)    JP(Japan)

NAS Heat	CM	C %	CO %	CR %	CU %	MN %	MO %	N %	NI %	P %
C16F	US	.023	.33	16.66	.33	1.35	2.047	.043	10.57	.031
		S %	SI %							
		.0225	.32							

**MECHANICAL PROPERTIES**

Product Id	1 d o i c x	HB No.	.2YS KSI	UTS KSI	RA %	Elong % 4D
BK4402 6	R L	141.0	40.00	81.00	60.00	56.00

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.

*[Signature]*  
KRIS LARK    6/28/2019