



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
 Customer: 007175 007 ENCORE METALS, DIV. OF RMCL ENCORE METALS, DIV. OF RMCL
 7805 51ST STREET S.E. 7805 51ST STREET S.E.
 CALGARY, AB T2C 2Z3 CALGARY, AB T2C 2Z3
 Finish: RT
 Corrosion: ASTM A262/15 Frac 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 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

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 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 %
C16F	US	.023	.33	16.66	.33	1.35	2.047	.043	10.57	.031
		S %	SI %							
		.0225	.32							

MECHANICAL PROPERTIES

Product Id	l o c a t i o n	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

Provided by: ENCORE METALS DIVISION OF RMCL

NAS