



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

HT# 328L

METALLURGICAL TEST REPORT

C180581
6870 Highway 42 East
Ghent, KY 41045-9615
(502) 347-6000

Certificate: 287601 3 Mail To: Ship To: Date: 4/26/2017 Page: 1
Customer: 007226 001 ASA ALLOYS ASA ALLOYS
20 CHALLENGER CRES. 20 CHALLENGER CRES. Steel: 316/316L
SHERWOOD PARK, AB T9H2R1 SHERWOOD PARK, AB T9H2R1 Finish: ST
Corrosion: ASTM A262 Prac E OK
Your Order: P041079 NAS Order: IN 0246758 02 Red Ratio: 18.1 :1

PRODUCT DESCRIPTION:

NACE MR0175 (MID RADIUS ONLY)
Round Bar, Annealed, Smooth Turned, Cold Finished
UNS S31600/S31603, EN 10204 3.1, ASTM A484/15
ASTM A276/16, ASTM A479/16, ASTM A182/13 CHEM ONLY,
ASME SA479/13, ASME SA182/10 CHEM ONLY, ASTM F899/11
AMS 5648L/AMS 5653H, AMS QQS-763D, QQS 763F
SOLUTION ANNEAL TEMP 1900F MIN, ASTM A320/08 CL 1 GR B8M
ASTM A193/10A-ASME SA193/10 CL 1 GR B8M(EXC PAR 7.2)

REMARKS:

COMPLIES W/REQUIREMENTS OF DPAR 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
BI6047 4		2.0000		1,072	144.00	4	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 %
328L	US	.0172	.2250	16.6380	.3925	1.4320	2.0170	.0441	10.6150	.0300
		S %	SI %							
		.0204	.2865							

MECHANICAL PROPERTIES

Product Id	1 d o i c r	HB No.	.2YS KSI	UTS KSI	RA %	Elong % 4D
BI6047 4	R L	150.0	39.00	83.00	68.00	57.00

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.

KRIS LARK 4/26/2017