



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

METALLURGICAL TEST REPORT

C185329
6870 Highway 42 East
Ghent, KY 41045-9615
(502) 347-6000

Certificate: 303598 6	Mail To: ASA ALLOYS 20 CHALLENGER CRES. SHERWOOD PARK, AB T8H2R1	Ship To: ASA ALLOYS 20 CHALLENGER CRES. SHERWOOD PARK, AB T8H2R1	Date: 6/15/2017	Page: 1
Customer: 007226 001			Steel: 316/316L	
			Finish: ST	
Your Order: P041332	NAS Order: IN 0248888 01		Corrosion: ASTM A262 Prac E OK	
			Red Ratio: 14.4 :1	

PRODUCT DESCRIPTION:

NACE MR0175(MID RADIUS ONLY)
Round Bar, Annealed, Smooth Turned, Cold Finished
UNS S31600/S31603, EN 10204 3.1, ASTM A484/16
ASTM A276/16A, ASTM A479/16A, ASTM A182/16A CHEM ONLY,
ASME SA479/16A, ASME SA182/16A CHEM ONLY
AMS 5648M/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 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
BI7911 6		2.2500		840	144.00	6	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 %
432E	US	.0206	.3285	16.7350	.3825	1.4015	2.0170	.0394	10.6000	.0310
		S %	SI %							
		.0260	.2460							

MECHANICAL PROPERTIES

Product Id	l o c	d i c	HB	.2YS	UTS	RA	Elong
			No.	KSI	KSI	%	% 4D
BI7911 6	R	L	197.0	48.00	94.00	63.00	41.00

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

6/15/2017