



# METALLURGICAL TEST REPORT

NORTH AMERICAN STAINLESS  
6870 HIGHWAY 42 EAST  
GHENT, KY 41045

6870 HIGHWAY 42 EAST

Certificate: 856124 1 Mail To:  
ASA ALLOYS  
Customer: 007226 001 20 CHALLENGER CRES.  
SHERWOOD PARK, AB T8H2R1

Ship To:  
ASA ALLOYS  
20 CHALLENGER CRES.  
SHERWOOD PARK, AB T8H2R1

Date: 7/26/2013 Page: 1

Steel: 316/316L

Finish: ST

Your Order: P030127

NAS Order: PN 0028320 03

Corrosion: ASTM A262 Prac E OK

## PRODUCT DESCRIPTION:

NACE MR0175 (MID RADIUS ONLY)  
Round Bar, Annealed, Smooth Turned, Cold Finished  
UNS 31600/31603, EN 10204 3.1, ASTM A484/11  
ASTM A276/10, ASTM A479/11, ASTM A182/10 CHEM ONLY,  
ASME SA479/10a, ASME SA182/10 CHEM ONLY, ASTM F899/11  
AMS 5648L/AMS 5653G, AMS QQS-763B, 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 252.225-7014A-1 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

H7T1

Product Id	Skid #	Diameter	Size	Weight	Length	Mark	Pieces	Commodity Code
BF5114 0		5.0000		2,292	144.00	1	1	

## CHEMICAL ANALYSIS

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

Chemical Analysis per ASTM A751/08

HEAT	CM	C %	CO %	CR %	CU %	MN %	NO %	N %	NI %	P %
H7T1	US	.0242	.4345	16.8110	.3525	1.3525	2.0770	.0358	10.5850	.0290
		S %	SI %							
		.0265	.2425							

## MECHANICAL PROPERTIES

Product Id	1 d	o i	HB	.2YS	UTS	RA	E1ng
		c r	No.	KSI	KSI	%	% 4D
BF5114 0	R L		146.00	40.00	84.00	56.00	45.00

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.

ERIC HESS

7/26/2013