



L317

# METALLURGICAL TEST REPORT

NORTH AMERICAN STAINLESS  
6870 HIGHWAY 42 EAST  
GHENT, KY 41045

C/103771

6870 HIGHWAY 42 EAST

Certificate: 941471 2  
Customer: 007226 001  
Mail To: ASA ALLOYS  
20 CHALLENGER CRES.  
SHERWOOD PARK, AB T8H2R1

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

Date: 4/22/2014 Page: 1

Steel: 316/316L

Finish: ST

Your Order: P032980

NAS Order: IN 0189066 02

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 A484/13a  
ASTM A276/10, ASTM A479/13a, ASTM A182/13 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 DFAR 252.225-7008 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 |
|------------|--------|----------|------|--------|------------------|------|--------|----------------|
| BG1481 3   |        | 3.2500   |      | 1,070  | 144.00           | 2    | 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 %   | MO %   | N %   | NI %    | P %   |
|------|----|-------|-------|---------|-------|--------|--------|-------|---------|-------|
| L3Y7 | US | .0173 | .1705 | 16.6295 | .4020 | 1.4030 | 2.0195 | .0357 | 10.5700 | .0320 |
|      |    | S %   | SI %  |         |       |        |        |       |         |       |
|      |    | .0250 | .3285 |         |       |        |        |       |         |       |

## MECHANICAL PROPERTIES

| Product Id | l d | o i    | HB    | .2YS  | UTS   | RA    | Elong |
|------------|-----|--------|-------|-------|-------|-------|-------|
|            | c r | No.    | KSI   | KSI   | %     | % 4D  |       |
| BG1481 3   | R L | 173.00 | 47.00 | 90.00 | 56.00 | 42.00 |       |

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 pertain 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

4/22/2014