



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: 725649 1 Mail To: _____ Ship To: _____ Date: 9/24/2021 Page: 1
Customer: 007090 001 Steel: 316/316L
Finish: ST
Corrosion: ASTM A262/15 Princ A/E OK
Your Order: P161886842 NAS Order: PN 0127182 01 Heat Treat Code: 66,400 Rod Ratio: 14.4 :1

PRODUCT DESCRIPTION:
Round Bar, Annealed, Smooth Turned, Cold Finished
UNS S31600/S31603, EN 10204 3.1, ASTM A484/20B
ASTM A276/17, ASTM A479/20, ASTM A182/20 CHEM ONLY,
ASME SA479/19, ASME SA182/19 CHEM ONLY, GRAIN SIZE = 6-8
AMS 5648/M, AMS 5653/J, AMS-QQS-763/D, QQS:763/F
NACE MR0175/15 (MID RADIUS ONLY), MR0103/15 (MID RADIUS ONLY)
SOLUTION ANNEAL TEMP 1900F MIN, ASTM A320/18 CL 1 GR B8M
ASME SA193/19 CL 1 GR B8M (EXC PAR 7.3.1)
ASTMA193/20 CL 1 GR B8M (EXC PAR 6.2.1)

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

2270491
S25425
Load # 51608

| Product Id | Skid # | Diameter | Size | Weight | -----Length----- | Mark | Pieces | Commodity Code |
|------------|--------|----------|------|--------|------------------|------|--------|----------------|
| BM1056 5 | | 2.2500 | | 1,157 | 144.00 | 1 | 1 | 525425 |

ANAB, ISO/IEC 17025, Certificate# L2323
Chemical Analysis per ASTM A751/20

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

| NAS Heat | CM | C % | CO % | CR % | CU % | MN % | MO % | N % | NI % | P % |
|----------|----|-------|------|-------|------|------|-------|------|-------|------|
| N32M | US | .021 | .46 | 16.52 | .30 | 1.26 | 2.071 | .041 | 10.61 | .028 |
| | | S % | SI % | | | | | | | |
| | | .0275 | .36 | | | | | | | |

MECHANICAL PROPERTIES

| Product Id | l o c k | d i a m e t e r | HB No. | .2YS KSI | UTS KSI | RA % | Elong % 4D |
|------------|------------------|--------------------------------------|-----------|-------------|------------|---------|---------------|
| BM1056 5 | R | L | 156.0 | 39.18 | 87.10 | 74.07 | 53.55 |

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 9/24/2021